

Modern Packaging

SEPTEMBER 1942



Canco Announces

NEW

FIBRE CONTAINERS



Revolutionary new lithographed containers look like metal . . . are made on existing can-making machinery with novel attachments added . . . and in most cases permit the use of present packing equipment.



AFTER MANY MONTHS of experimentation, the American Can Company has developed a revolutionary method for making cans with fibre bodies on machines formerly used for the manufacture of metal ones!

In this practical fashion, Canco will ease the container situation for many of you who manufacture dry products and whose supplies of metal containers have been curtailed through government order.

These new fibre containers will be suitable for most dry products, such as drugs, tobacco, cosmetics, spices, powders, etc.

Canco will share this new development with the entire can-making industry so that the demands of the trade may then be met during the war emergency.

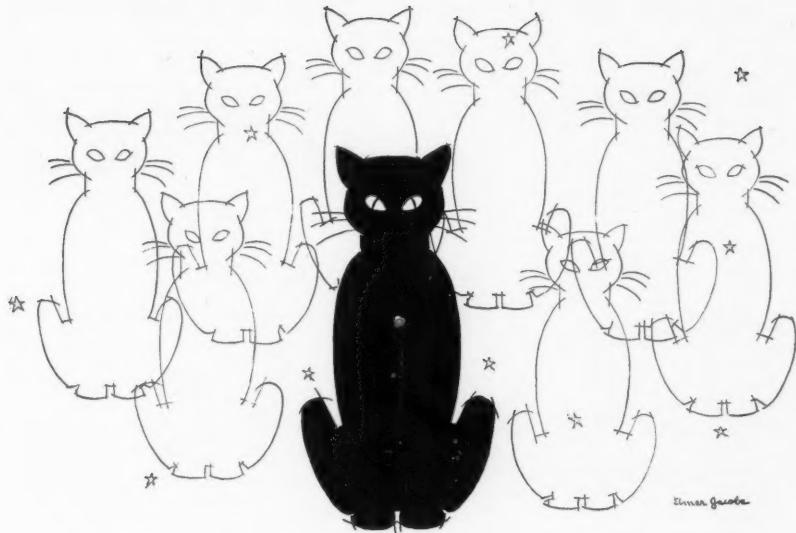
Canco customers may place orders for all-fibre cans up to the limit of production capacity on existing equipment. Fibre containers with metal ends will be supplied to the extent that black plate is made available for the manufacture of ends.

In announcing this new development, Canco believes it is only one instance in one industry of how the American way of free enterprise and mutual help pays off in wartime.

A M E R I C A N C A N C O M P A N Y

230 PARK AVENUE, NEW YORK, N. Y.

"Largest Manufacturers of Metal and Fibre Containers"



COPY "CAPS"

IMITATION, it has been said, is the sincerest flattery. Be that as it may, an *original* invariably stands for what it is . . . the first and the finest. That which is imitated must first be created.

The standard C T Cap was perfected and pioneered by Phoenix. So, also, its several improvements. Most noteworthy of these improvements is the *curled under edge* which eliminates the gold lacquered bead—permitting all-over decoration.

The C T Cap with curled under edge is of especial

service just now. It is replacing the S T (double shell) Cap on many jars and bottles. The double shell cap requires *double* the metal of a C T Cap, and metal . . . well, you've heard there are shortages.

Imitation may be the sincerest flattery . . . we won't argue the point. But this we know: The imitator follows, never leads. And, imitation products are inseparably linked with imitation quality.

When you change to C T, be sure to specify Phoenix and not a *copy cap!*

PHOENIX METAL CAP CO.

2444 West Sixteenth Street
CHICAGO

3720 Fourteenth Avenue
BROOKLYN

CHARLES A. BRESKIN, Publisher
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Modern Packaging

SEPTEMBER 1942

VOLUME 16 NUMBER 1



OCTOBER

Weakest point of all packaging, regardless of materials used, is at the seal. Never before have those with goods to pack been so conscious of this fact. Military and Lend-Lease shipments have placed demands on adhesives to meet every possible climatic condition. Shortage of metals and wider use of paper packages have intensified such demands. Curtailment of imports of rubber and other ingredients in glues have increased the search for substitutes. What should you know about adhesives? What performance should you expect of them? Next month Modern Packaging will bring you a review of this important part of the packaging picture in light of today's rigid requirements.

WALTER S. ROSS, Promotion
 L. B. CHAPPELL, Los Angeles

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AN IMPORTANT MESSAGE to OWNERS of PACKAGING MACHINES

The United Nations control *only 7%* of the world's rubber output. So the Axis is happy when we don't take care of the rubber we own. The *wrapper feed rubbers* on your Redington packaging machines,* for instance—highly important for many packaging jobs.

Yet it's easy to use extra special care to keep those feed rubbers in first class shape for the duration. *For example:*

- 1.** Keep them clean by washing off frequently with denatured alcohol. Ink and other foreign substances tend to make rubber hard and slippery.
- 2.** If the rubbers are hard, "roughen" them up with an emery cloth or a knife.
- 3.** When they wear a "low spot," turn them slightly—you should be able to get at least two more "high spots" before the rubbers become unserviceable.

- 4.** When the start-rubbers are worn down, force them on a slightly larger mandrel than the hole size, and regrind. If the resulting smaller diameters will not permit proper operation, slip a piece of cardboard under the roller and shim the surface out.
- 5.** If you're having wrapper feed trouble, be sure it isn't caused by something else before replacing the rubber.

There must be other ways you production men have of conserving rubber parts on packaging machines. *Drop us a note* and we'll pass your tip on to others. Let's all get behind the drive to conserve rubber—it's one way to help "rub out" the Axis!

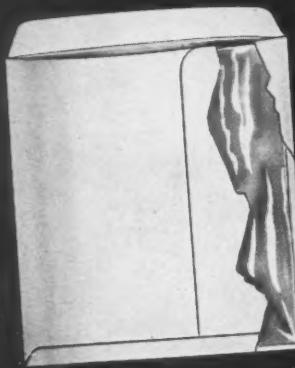
* Redingtons are still being built under high priorities.

F. B. REDINGTON CO. (Est. 1897) 110-112 So. Sangamon St., Chicago, Ill.

REDINGTON
PACKAGING MACHINES

FOR CARTONING • WRAPPING • SPECIAL PACKAGING

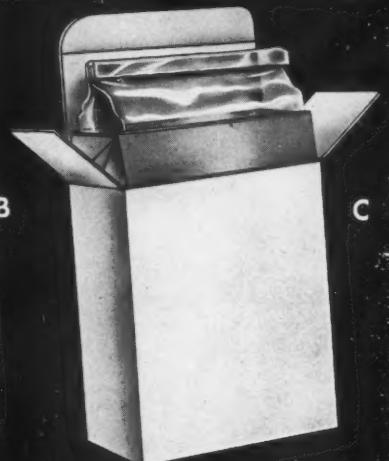
Let's Get Together on YOUR PACKAGING CHANGE-OVER!



A



B



C

SEMI-FLOATING CONSTRUCTION Eliminates Breakage!

- A. Two-Dimensional Packet. A "semi-floating" pre-fabricated, duplex, heat-sealing Inner Bag, with heavy-duty casein-coated, sulphite-base Outer Bag.
- B. One-Piece Collapsible Carton. Tuck, lock or glue end, with duplex, self-opening, "semi-floating," superseal Inner Bag built for heat-sealing.
- C. Two-Piece Collapsible Carton Set. Outer shell equipped with tuck, lock or glue end. Inner sleeve equipped with duplex, self-opening, "semi-floating," superseal Inner Bag built for heat-sealing.



**Easy to Open, Easy
to Fill, Easy to Close!**

These Practical Developments May Solve Your Packaging Problems!

Our packaging engineers are working with scores of companies faced with the problem of changing over to new packages for dehydrated and frozen foods. Developments include three basic types, as sketched and described here. These packages, of course, can be varied in size and specifications to fit your own particular requirements. Consult our engineers today.

In Full Color to Speed Your Sales!

Our Full Color Lithography imparts tremendous eye appeal and sales power to these packages—at surprisingly moderate cost. Our exclusive Full Color "Gang Run" Service saves you money and, in addition, we place our large library of Full Color fruit and vegetable illustrations at your disposal—at no extra cost!

FREE—28-page book "The Value and Patriotic Use of Full Color." Tells how to meet today's selling problems, how to use Full Color; describes our facilities for giving you the finest materials and service. Write for your copy.

Let Us Help Solve Your New Packaging Problems—Write Dept. 1405

STECHER-TRAUNG LITHOGRAPH CORPORATION

Rochester, New York

San Francisco, California

Offices in Principal Cities

PRICE:

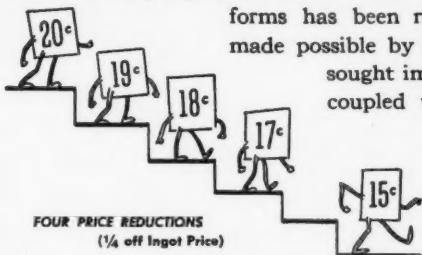
THE FORGOTTEN SUBJECT

HOW MANY HEADLINES have you read lately featuring low prices?

How many quotations have you received lately wherein price was the prime factor? Availability is what you consider first, these days.

WHILE YOUR BACK WAS TURNED, something big has been happening to aluminum prices. You may not have noted the change, unless you are using aluminum in war materiel.

TWO MAJOR CHANGES have taken place. The price of ingot is down to 15c per pound. Also the cost of making many fabricated forms has been reduced. These have been made possible by the fruition of many long sought improvements in techniques, coupled with greater volume, and abetted by revolutionary new equipment.



YOUR PRIVATE POCKETBOOK benefits now, because every pound of this cheaper aluminum is going into planes and other equipment. You're getting more bombers for your dollar.

LET YOUR IMAGINATION SOAR. Translate the meaning of much lower prices for Alcoa Aluminum into the *future* of your business. You'll come out with new answers, if you really engineer that imagination down to earth.

YOU COULD EVEN come up with something that would revolutionize your business, whether it is building, or manufacturing, or packaging, or printing, or whatever.

YOUR COMPETITORS, to use an old civilian phrase, are probably doing some Imagineering of that kind—getting ready for the day when.

OUR ENGINEERS could probably suggest some interesting angles for you to work on.

Aluminum Company of America, 2129 Gulf Bldg., Pittsburgh, Pa.

ALCOA ALUMINUM



IMAGINEERING

★
SO MUCH
SO SOON
★

Carton Buyers! underline

- ★ **COATED LITHWHITE ACTUALLY COSTS LESS THAN SOME**
- ★ **REVOLUTIONARY NEW BOARD MAY SHOW YOU THE CARTON APPEARANCE, LOWER PACKAGING COSTS AT**

YOU BET THAT'S SOMETHING to underline with a sharp pencil, today . . . with the same sharp pencil you're using right now to go over costs all along the line.

For *Coated* Lithwhite is the revolutionary new boxboard that's shown hundreds of carton buyers how to step down costs and step up appearance . . . a finer, whiter, quality *coated* board that costs no more than many uncoated boards, actually costs less than some.

Hard to believe? Then listen. *Coated* Lithwhite is made by an entirely new process. It is actually formed, made, coated on one machine . . . in one continuous operation.

And the same revolutionary process that produces *Coated* Lithwhite with such amazing economy actually produces a finer, whiter board . . . a smoother more velvety surface that makes inks lay more smoothly, come up with greater brilliance. Type, zins, halftones print crisper, cleaner, sharper. *Coated* Lithwhite seals better, too, scores without cracking.

TRY THIS DESK-TOP COMPARISON

WRITE TODAY for sample sheets of this sensational, new coated board. We'll send you plain sheets, and sheets right off our presses. Or send us your original carton engravings, let us prove them on *Coated* Lithwhite. Then make a side-by-side comparison with your present cartons. We feel sure your next question will be, "How much?" . . . and we believe our quotation will also amaze you.



GREATEST FORWARD STEP in boxboard making in 50 years. A machine that brings together coated board quality and uncoated board economy for the first time. It actually forms, makes, coats *Coated* Lithwhite in one continuous operation.



CUTS PACKAGING COSTS. Just as high speed production methods have cut the cost of making guns and planes . . . so has the *Coated* Lithwhite revolutionary new process brought to carton users a fine coated board at a modest price.



The GARDNER-RICHARDSON Co.
Manufacturers of Folding Cartons and Boxboard • MIDDLETOWN, OHIO

See this with a sharp pencil...

UNCOATED BOARDS

WAY TO IMPROVED
THE SAME TIME



SEE THE DIFFERENCE—feel the difference. Notice the smooth velvety white surface—its exclusive mineral coating is applied evenly without hills or valleys. Inks stand up without greying. Zincks, haltones print crisper, sharper.



TODAY, FEWER WOMEN ARE ASKING . . . more are reaching for the merchandise they buy. The brilliant, cleaner-looking package you get with Coated Lithwite can guide extra hands to your product.

Sales Representatives in Principal Cities: PHILADELPHIA, CLEVELAND, CHICAGO, ST. LOUIS, NEW YORK, BOSTON, PITTSBURGH, DETROIT.

WHAT'S YOUR PROBLEM?

- ★ Finding a substitute for tin, metal or glass?
- ★ Packaging dehydrated frozen foods?
- ★ Cutting packaging costs or improving display?

Put it up to the Gardner-Richardson technical staff. We either have the answer or we'll burn our lights at night 'til we get it. Write today, outlining your problem in full. Better still, wire or phone and ask a Gardner-Richardson representative to call and talk it over.

More packages from Less paper

*A Constructive War Time Service
Offered to Established Manufacturers Without Cost or Obligation*



As a part of a material conservation program, our design department is effecting changes in our customers' packages that reduce paper content by as much as 30%. That makes it possible to produce more packages from the smaller stocks now available for private industry needs.

We offer this same service without cost or obligation to *any* established manufacturer. Our design and production experts will study your package and recommend ways by which the paper content can be reduced and



much of the effectiveness still retained.

We have no desire to gain immediate sales by this service. War production and the needs of our present customers—which, of course, come first in that order—are now taxing our large manufacturing facilities. This service is offered rather as an additional means of conservation and as a contribution to the common good.

If you will write us enclosing samples of your present package, we will send you our recommendations and suggestions.

INVEST IN AMERICA!

Buy United States War Bonds and Stamps

W. C. **Ritchie**
AND COMPANY
8847 BALTIMORE AVENUE • CHICAGO

SET-UP PAPER BOXES
FIBRE CANS
TRANSPARENT PACKAGES

NEW YORK

DETROIT

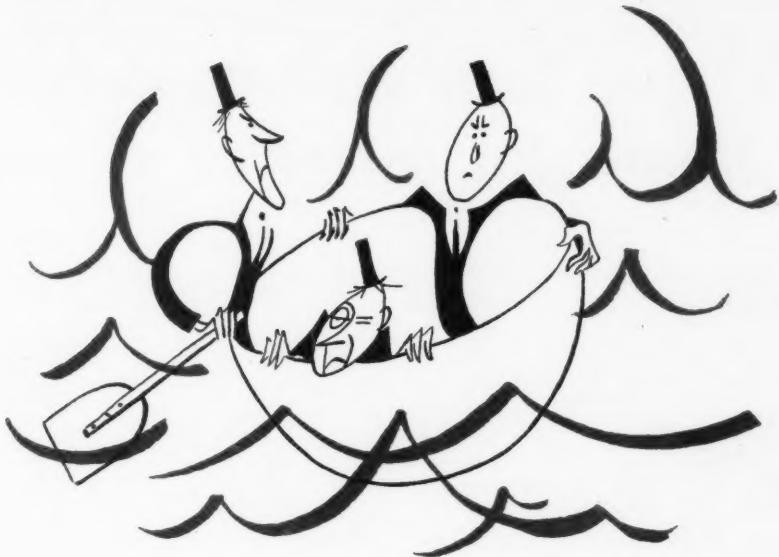
LOS ANGELES

ST. LOUIS

MINNEAPOLIS

DENVER

MIAMI



**"IF THE BOWL HAD BEEN STRONGER
MY TALE HAD BEEN LONGER"**



Stock bottle No. 413 is a container that won't founder in heavy going. Capacities: 2 oz., 5 oz. Finish: 18 mm. 410.

IT USED to be quite a pastime to seal messages in glass bottles and set them adrift on the ocean. The floating bottle has been found in many a shipwreck-treasure-island movie, too.

But not many people get to read those messages in real life. In merchandising, for instance, to get your message to the people you must reach, you've got to have a bottle that will do more than float. Many a good product has foundered in an un-salesworthy package—perhaps one that was poorly designed or poorly constructed.

There are many potential causes of failure. They can be avoided, and a sound glass bottle assured, however, whether the product be cosmetics, drugs, foods or household products. We can implement these words with packages.

CARR-LOWREY



3-Point Service

creates

PRACTICAL • ATTRACTIVE • ECONOMICAL
glass packages for cosmetics,
drugs, foods, household products.

Carr-Lowrey Glass Co.

Factory and Main Office: BALTIMORE, MD.

New York Office: 500 Fifth Ave. • Chicago Office: 1502 Merchandise Mart

Are You Overlooking Some Easy-to-Cut Costs?



**Conserve Time, Materials and
Space with the Aid of these
Free  Booklets.**

"How To Seal" and "How To Stack And Load," are two of H & D's Little Packaging Library booklets, prepared to help manufacturers plan more effective, more economical packaging. They show you how sealing, storing and stacking of corrugated shipping boxes can be made more efficient, how time in the shipping department can be made more productive, how sealing materials can be "stretched," how space can be more completely utilized.

For more tangible service, the facilities of H & D's Package Laboratory are available to all manufacturers seeking help in redesigning present packaging, preparing packages for tomorrow's competitive merchandising.

Like the counsel of H & D Package Engineers, these Little Packaging Library booklets are yours without obligation. Write for the copies you need. Be sure each man in your shipping and traffic departments has an opportunity to study the information they contain. It will help you save money today and tomorrow.

HINDE & DAUCH Authority on Packaging

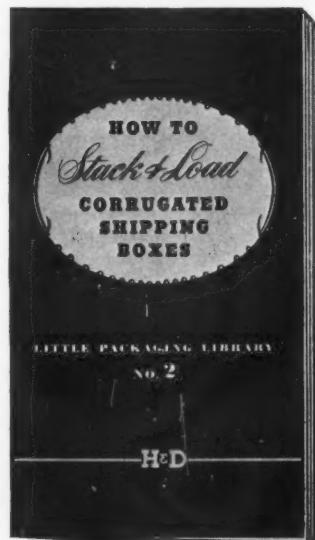
4214 DECATUR STREET, SANDUSKY, OHIO

FACTORIES IN BALTIMORE • BOSTON • BUFFALO • CHICAGO • CLEVELAND
DETROIT • GLOUCESTER, N. J. • HOBOKEN • KANSAS CITY • LENOIR, N. C.
MONTREAL • MUNCIE • RICHMOND • ST. LOUIS • SANDUSKY, OHIO • TORONTO

12 MODERN PACKAGING



Facts about the four most commonly used sealing methods, and how they are especially effective on certain types of shipping boxes, are outlined in this book.



Eight rules for efficient stacking and loading are presented concisely in "How To Stack And Load." Write for your free copy.

Packaging Insurance*

COVERS 3 RISKS

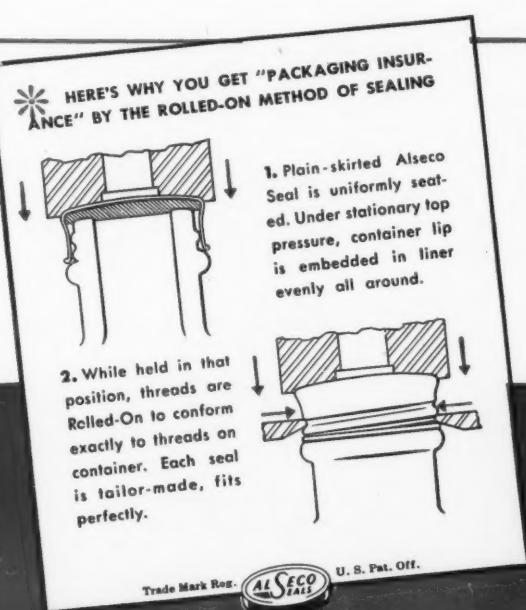
PROFIT AND LOSS suffers directly when there's inefficiency in the sealing operation. Packaging Insurance (Alseco Rolled-On Method of Sealing) protects you against this risk. Alseco Machines apply Alseco Seals quickly. They give long service with minimum downtime.



YOUR ultimate risk is the consumer's possible disapproval. Tailor-made Alseco Seals protect you there, too. They safeguard the strength and purity of your product until it is used. Yet they are easy to open. Consumers get full satisfaction. You earn good will.



THE RETAILER is spared the risk of complaints on leakage and evaporation due to faulty sealing. Packaging Insurance helps you win the co-operation of the dealer. This, too, directly affects your P. & L. statement.



WAR FIRST. Most of our facilities are now devoted to the manufacture of war materiel. Our experience with metals, and our skill in designing and building sealing machines have enabled us to develop new, specialized machines which are speeding production of these parts in our own plant and other plants, too.

What we are doing and learning now, will mean even better seals and sealing machines for our civilian customers after the war.

Alseco Seals can be supplied, subject to all regulations governing metal closures

TAILOR-MADE

ALSECO SEALS

ALUMINUM SEAL COMPANY, 1345 THIRD AVENUE, NEW KENSINGTON, PA... At your service: 28 years of experience building quality seals and sealing machines.

**The
1942 All-America
Package
Competition
Owes a Debt to
American Ingenuity**

THE overwhelming decision of American packagers to carry on in the face of shortages and production difficulties is the basis of the forthcoming All-America Package Competition.

American Ingenuity will be the foundation of the Competition.

Substitute Materials—their development and use—will be important considerations in judging the entries.

Conversion—of facilities, production, packages will play a great part in this wartime Competition.

Morale, and how packagers have helped sustain it, will be the story that this All-America will tell the whole world.

Functional design, stock containers, elimination of waste, these will be other points to consider in judging this All-America.

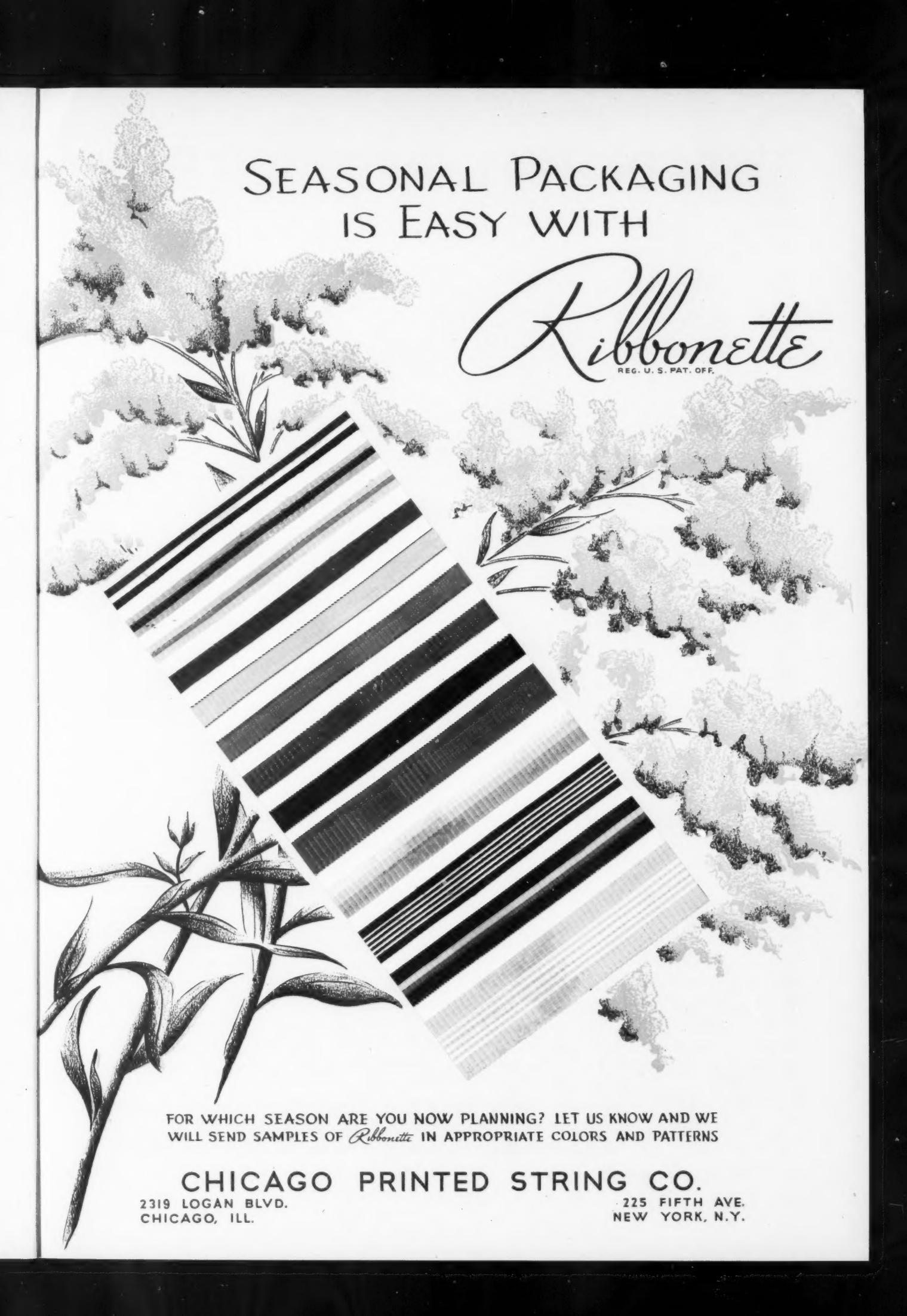
There will be a place for everyone—and it will be up to the packagers of America—to you—to see that the people and the Government are shown how packaging “keeps ‘em rolling” in peace and war.

Send for entry blanks today—no cost or obligation.

**1942
ALL-AMERICA PACKAGE COMPETITION**

122 East 42nd Street

New York City



SEASONAL PACKAGING
IS EASY WITH

Ribonette
REG. U. S. PAT. OFF.

FOR WHICH SEASON ARE YOU NOW PLANNING? LET US KNOW AND WE
WILL SEND SAMPLES OF *Ribonette* IN APPROPRIATE COLORS AND PATTERNS

CHICAGO PRINTED STRING CO.

2319 LOGAN BLVD.
CHICAGO, ILL.

225 FIFTH AVE.
NEW YORK, N.Y.

THIS IS REAL CONSERVATION



WINDOW CONTAINERS APPROVED BY WPB FOR FOOD PRODUCTS

Transparent packaging materials are essential to the war effort. But the Government recognizes that they combine visibility (and saleability!) with real protection for foods.

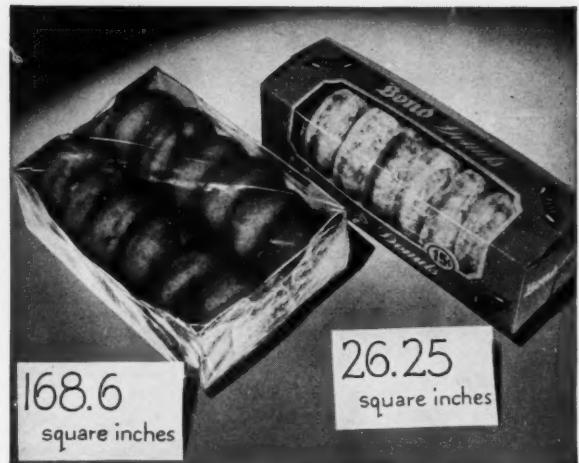
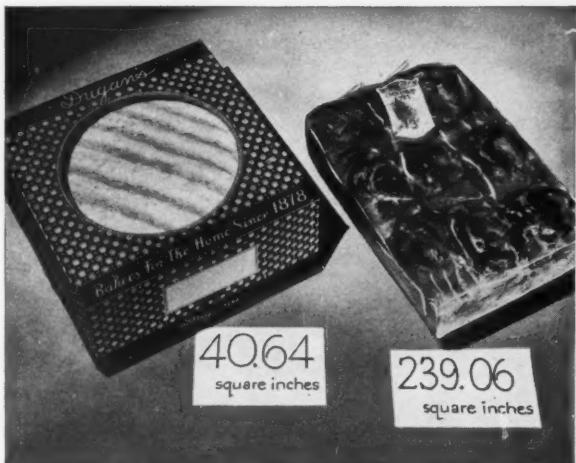
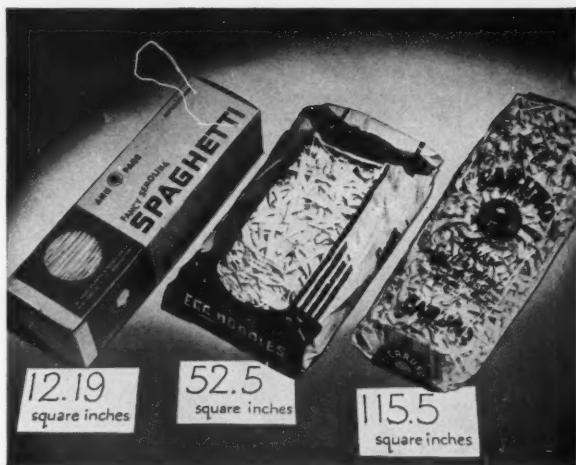
In the interests of true conservation, a new WPB ruling permits food packages with windows of Lumarith and other transparent ma-

terials to replace fully transparent packages which require so much more of the critical materials so vital to our war effort.

This action of the WPB makes it possible to conserve transparent materials and still assure protective, eye-appeal packages for America's food products.

Typical savings—by using only *windows*, instead of wholly transparent boxes or bags—are impressive, as these exhibits show. Celanese Celluloid Corporation, a Division of Celanese Corporation of America, 180 Madison Avenue, New York City.

CELANESE CELLULOID



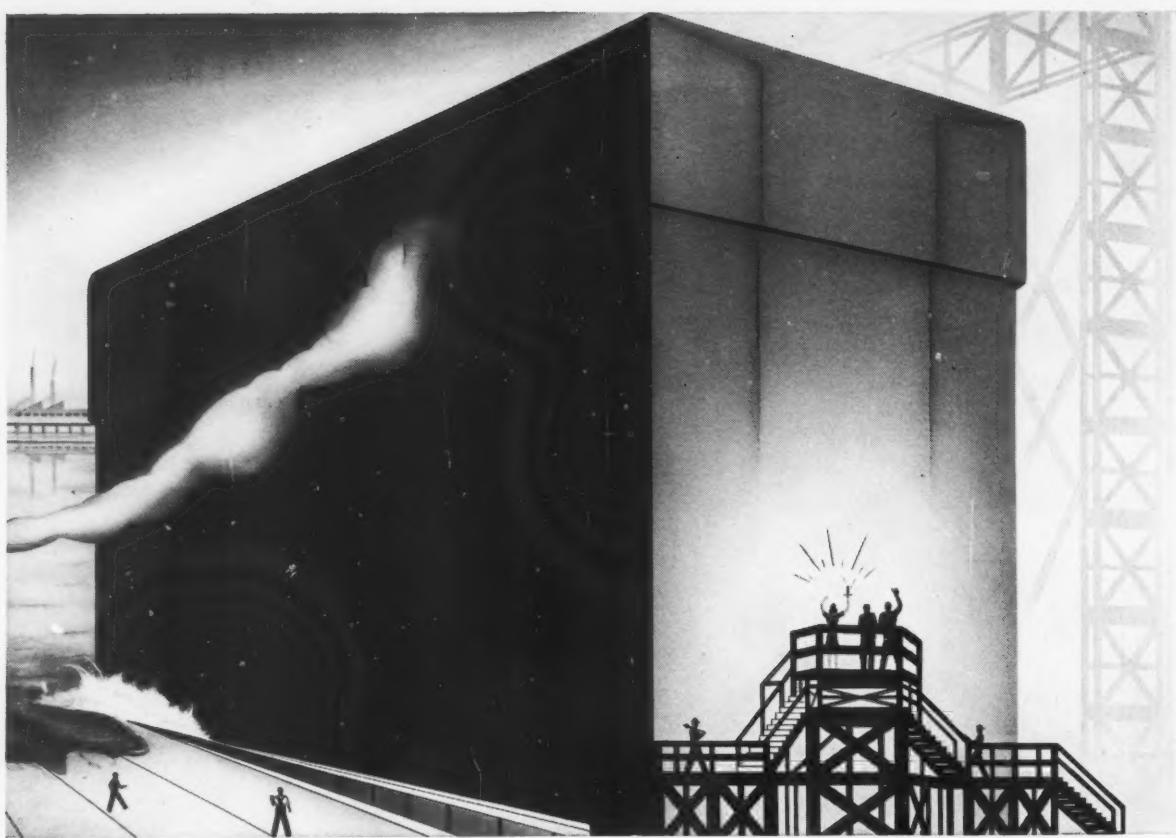
LUMARITH

Lumarith is grease-proof, water-proof—does not shrink, stretch, dry out or become brittle—protects against mold, germs and poison gas and is not affected by extremes of temperature or humidity.



CORPORATION

The first Name in Plastics



Copyright 1942, Master Craftsmen

**SET UP PAPER BOXES
EXCEL IN SALES APPEAL**

BALTIMORE, MD. Maryland Paper Box Co.	NASHVILLE, TENN. American Tri-State Paper Box Co.
BOSTON, MASS. Bicknell & Fuller Paper Box Co.	NEWARK, N. J. Mooney & Mooney Newark Paper Box Co.
BROOKLYN, N. Y. Specialty Paper Box Co. E. J. Trum Co., Inc.	NEW YORK, N. Y. A. Dorfman Co., Inc.
BUFFALO, N. Y. Thoma Paper Box Co.	PAWTUCKET, R. I. Shaw Paper Box Co.
CHATTANOOGA, TENN. Atlas Paper Box Co.	PHILADELPHIA, PA. Data Mfg. Co. Walter P. Miller Co., Inc.
CHICAGO, ILL. Kroesch Paper Box Co.	Royal Pioneer Paper Box Co. Edwin L. Steele Co.
COLUMBUS, OHIO Columbus Paper Box Co.	Sprawles & Allen
DANVERS, MASS. Friend Paper Box Co.	PORRTLAND, ME. Casco Paper Box Co.
DETROIT, MICH. Stecker Paper Box Co.	PROVIDENCE, R. I. Hope Paper Box Co.
HARRISBURG, PA. The McClintock Corp.	Taylor Paper Box Co.
KANSAS CITY, MO. Crook Paper Box Co.	SEATTLE, WASH. Union Paper Box Mtg. Co.
LEBANON, PA. Lebanon Paper Box Co.	SOMERVILLE, MASS. Consolidated Paper Box Co.
LOUISVILLE, KY. Finger Paper Box Co. Kentucky Paper Box Co.	ST. JOSEPH, MICH. Williams Bros.
MERIDEN, CONN. Shaw Paper Box Co.	ST. LOUIS, MO. Great Western Paper Box Co. Moser Paper Box Co.
<i>Cooperating Suppliers:</i>	
Appleton Coated Paper Company; Blackstone Glazed Paper Company; Louis DeJonge & Company; Hampden Glazed Paper and Card Company; Hasen Paper Company; Holyoke Card and Paper Company; Holyoke Coated & Printed Paper Co.; Hughes and Hoffman; Lachman-Novasel Paper Company; Marvellous Company; Matthias Paper Corporation; McLaurin-Jones Company; Middlesex Products Corporation; Nashua Gummmed and Coated Paper Company; Paper City Manufacturing Company, Inc.; Plastic Coating Corp.; Racquette River Paper Company; Riegel Paper Corporation; Stokes and Smith Co.; Charles W. Williams & Co., Inc.	

NEW "BOTTOMS" FOR YOUR PRODUCT?

Many products are being launched in new packaging attire. Alterations and changes become necessary as our war economy eliminates or ration materials.

Box board for set-up boxes is available, and set-up boxes have always afforded an ideal packaging medium. This type of box is rigid, providing greater strength, and is delivered to the customer ready to use. It accomplishes savings in loading and shipping, as well as being unusually attractive in appearance.

The leaders in the set-up paper box industry have formed a group of "Master Craftsmen" for the purpose of offering a prompt and intelligent packaging service under wartime conditions. A clearing house for information has been established. One Master Craftsman helps another in the all-out effort to solve the problems of design and production.

If you have a packaging problem created by conversion to war production; or if the shortage of materials has made it necessary to change the packaging of your regular line, it will pay you to consult the "Master Craftsman" nearest you.

BUY BONDS FOR VICTORY

MASTER CRAFTSMEN of the SET-UP PAPER
BOX INDUSTRY

ROOM 1106, LIBERTY TRUST BUILDING, PHILADELPHIA, PA.



*Start with
Forsman*

*and insure
package appeal*

C · H · FORSMAN CO · NEW YORK
Designing, Fine Color Printing and Embossing





Worth looking into!

Packaging problems disappear like magic when you put your product in Anchor Hocking glass. And that's not the only reason it's worth looking into. By using this excellent wartime package of plentiful glass, you help your government conserve large quantities of steel, tin and tinplate.

Today, Anchor Hocking glass offers you many outstanding advantages which spring

from a variety of new developments. In addition, Anchor Hocking provides, at no extra cost, the services of its experienced specialists in engineering and in biological and chemical research. These men know packaging from every angle. They are particularly important to new users of glass who seek thoughtful aid and counsel. They can help greatly in simplifying and expe-

ding the change-over to glass.

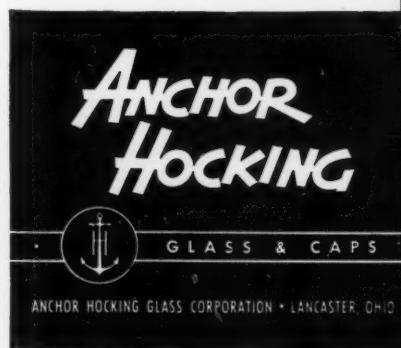
Remember—Anchor Hocking makes containers and closures. And because they're made for each other, are available from a single source of supply, it pays you to get both in the Anchor Hocking complete package. If you wish them separately, your friendly Anchor Hocking packaging engineer will be happy to serve you.

Worth looking into! Anchor Hocking Containers and Closures for DRUGS!



Anchor Hocking Wide Mouth Rounds, available in a complete line of 21 sizes ranging from 3 cc to 950 cc, are highly popular for tablets, pills, capsules and dry chemicals. They are easy to fill and contents are highly accessible. Generous labelling space. Samples on request.

The Anchor Improved C. T. Cap... Pitch of cap thread and glass container thread matches throughout their entire length, gives better, tighter seal. Absence of interference between cap and container threads makes cap easier to spin off or on. Fine knurls, cylindrical side walls and neatly turned wire edge provide better appearance.



It's Good to Get Memos like this...

BUT THE BUSINESS
Warnercraft helps
Build MAKES YOU
FEEL EVEN BETTER

Customers depend on Warnercraft for extra services and extra quality. Warnercraft's top-notch designers are trained to develop practical ideas that cut packaging costs and improve sales value and eye appeal. Warner sales representatives are well schooled in service. Special patented Warner designs for set-up or folding boxes and displays save boxboard, save time, save money. Warner packages are not always the cheapest—but they consistently win credits for a large share in the business progress of scores of important manufacturers. Perhaps Warner can help you with a design—idea—quotation. It will cost you nothing to find out!



YOUR PHONE IS ALWAYS HANDY

- ... For **WARNERCRAFT DESIGNS**
- ... For **WARNERCRAFT QUALITY**
- ... For **WARNERCRAFT SERVICE**

Call Bridgeport 4-0101 New York Ashland 4-1195

INTER-OFFICE MEMO

Office of the
President

Date
3/10/42

John:

Our new packages look

like a million dollars.
Congratulations! Who did them?

J.D.Browning

Mr. Browning—
We've switched to
Warnercraft. They did
the designs, too!

JHM.

WARNERCRAFT

Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

THE WARNER BROTHERS COMPANY

*Main Office and Factory: 325 Lafayette Street, Bridgeport, Conn.
New York Sales Office: 200 Madison Avenue, New York, N. Y.*

THE MACHINE ISN'T INVENTED

...that can do this man's job!



MEET George Sieberman. For 36 years he has tooled designs by hand in the cast iron molds that form Armstrong's Glassware—first as an apprentice, then as a master artisan.

George is proud of his difficult and exacting job—proud that no machine can match the quality of his handwork. He will tell you in fact that without skill like his, all the modern precision machinery and scientific research methods used in the production of Armstrong's Glass would be wasted—would, indeed, be incapable of producing glassware of quality.

And he'd be right. For *he* is this quality—he and the hundreds of other experienced and highly skilled men who have spent the greater part of their lives creating Armstrong's glass packages.

Armstrong makes a complete line of quality glassware, as well as a wide range of closures, to meet every glass packaging need. Write for complete details—Armstrong Cork Company, Glass and Closure Division, 916 Arch St., Lancaster, Pa.



ARMSTRONG'S GLASS

and **ARMSTRONG'S
CLOSURES**





*Mundet offices and representatives
are conveniently located:*

ATLANTA
339-41 Elizabeth Street, N.E.

BROOKLYN
65 South Eleventh Street

CHICAGO
135 West 63rd St.

CINCINNATI
427 West 4th Street

CLEVELAND
Britten Terminal, Inc.

DALLAS
505 Southland Annex

DENVER
The Stone-Hall Co.

DETROIT
335 West Jefferson Avenue

HOUSTON

Commerce and Palmer Streets

JACKSONVILLE, FLA.

Laney & Delcher Warehouse

KANSAS CITY, MO.

1428 St. Louis Avenue

LOS ANGELES

1850 North Main Street

LOUISVILLE

Kentucky Bottling Supply Co

MEMPHIS

Memphis Bonded Warehouse

NEW ORLEANS

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2415 South Third Street

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also J. C. Millet Co.

In Canada:

Mundet Cork & Insulation, Ltd.
35 Booth Avenue, Toronto

The Right Closure for the Need

If you contemplate a change in sealing or packaging methods, we suggest that you consider our ability to serve you. Our background is 75 years experience in making many kinds of closures for many kinds of products. Our specialty is to insure the quality of your products with the most practical closures available. Our desire is to help you . . .

now. Tell us your need. Mundet Cork Corporation, Closure Division, 65 S. Eleventh Street, Brooklyn, New York.

MUNDET 
CLOSURE SERVICE

MOLDED CORKS • MOLDED SCREW CAPS • EMBOSSED WOOD-TOP CORKS • CROWNS • PLAIN CORKS



"CEL-O-SEAL" BANDS PROTECT—AND CONSERVE— THE CONTENTS OF PACKAGES...

► TODAY when Conservation is vital to the nation's war program, small "Cel-O-Seal" bands make an important contribution. On wine, drug and medicinal packages, they secure closures firmly in place; hence —

1. Keep the product in, safe from evaporation, and
2. Keep destructive or harmful influences out.

"Wind-O-Band" seals—the kind made for distilled spirits packages—provide this protection, too; and, moreover, protection of U. S. Government Tax Stamps.

"Cel-O-Seal" also "tops off" glass packages attractively, provides individuality—and often a "second label"—for the bottle or jar that wears it.

DU PONT

CEL-O-SEAL
BANDS

Sold by

E. I. DU PONT DE NEMOURS & CO. (INC.)
"CEL-O-SEAL" SECTION
Empire State Building, N. Y. C.
ARMSTRONG CORK COMPANY
GLASS & CLOSURE DIV., Lancaster, Pa.
I. F. SCHNIER COMPANY
683-89 Bryant Street, San Francisco, Cal.

Duraglas

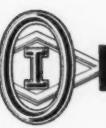
...SYNONYM FOR A NEW BUYING HABIT

Habits change rapidly and permanently during war periods. Remember how radically women changed their dress and hair styles after 1918?

Buying habits change, too. The trend to glass packages that started years ago has been accelerated. More and more products and *types of products* are going into Duraglas, the better container that came from a new technique of glass-making.

Many women saw the trade name "Duraglas" for the first time on a beverage bottle or coffee jar. That was three years ago. Today, most of the things they buy, from aspirin tablets to window cleaners, are commanding their attention in glistening Duraglas salespackages.

Women prefer Duraglas packages for their convenience, dependability, beauty. And because women dominate America's buying, packaging experts are crystallizing these new buying customs by planning *beyond the duration* with complete lines packaged in Duraglas now.

OWENS  **ILLINOIS**
GLASS COMPANY TOLEDO, OHIO

The advertisement shown at left will appear in the October issue of McCALL'S

Paper Problems?

Let us help you

With the present emergency conditions, many manufacturers are faced with ever increasing problems in the packaging of goods . . . Truly Level papers offer a good foundation for new ideas and plans in the minds of far sighted converters, packagers, lithographers and printers.

With a background of valuable experience in research and development lay the abilities of a modern mill.

You are welcome to the full cooperation of Fitchburg's complete facilities.



COATING BASE STOCK

for flint, friction and plate finishes. Special grades for greeting card, printing and embossing

BOARD LINING

and Combining Papers, both free and groundwood, for board mills and box makers

PYROXYLIN PAPERS

High super finishes to secure best results with minimum of coating solution

GUMMING PAPERS

with the strength and surface qualities for your particular needs

LACQUERING PAPERS

with a surface specially adapted to lacquer applications

ALKALI PROOF PAPERS

for soap, chemicals, dyes, etc., or wherever an alkali condition exists

BOX WRAP

including Snowhite-Stiktite, an exclusive Fitchburg development

FOIL MOUNTING PAPERS

developed after years of research

PRINTING PAPERS

Uniform register on "Fitchburg Finish" aids printer and lithographer

PRINTING • PACKAGING • CONVERTING • PAPERS





Why do bees air out their package every day?

Did you know that bees do a "fan dance" standing still? They do it every day, to air condition the package they live in—the beehive.

A beehive bulges with busy bees. Where there's such a crowd, the air soon would grow stale—workers soon would get groggy. Packaging problem: to keep the air fresh. The bees have solved that one.

Certain bees have just one job—to act as fanners. They stand perfectly still all day, ceaselessly beating their wings. This fanning forces stale air out of the hive, makes currents of clean, fresh air flow in. The air movement, too, helps evaporate water from the honey and make it purer and "riper."

Bees made their package successful.

They had to do it themselves. Modern business men are luckier. They come to Continental, packaging headquarters for industry. Today, however, war efforts come first.

The experience and resources of Continental are now enlisted in helping the nation. Besides millions of food containers for civilian America, for our fighting forces, and for our Allies, we are producing other packages to protect America.

Anticipating another day, we see many new applications of the things we are learning and doing now. If you are looking ahead or developing an idea, we'll be glad to help you. Our packaging engineers, research men and designers are at your service at all times.

What will be the PACKAGE of the FUTURE?

The package of the future will be the package that best meets *all* these 10 important points:

1. Protects against light, heat, and dirt.
2. Does not chip, break, or tear.
3. Is adaptable to *highest* speed filling operations.
4. Is economical to pack, ship, and handle.
5. Light weight, compact, no waste space.
6. Moisture and vapor proof, impervious to temperature changes.
7. Easy and convenient to display, sell.
8. Available in wide variety of sizes, shapes, styles (over 500).
9. Offers maximum convenience and safety in consumer usage.
10. Permits high processing temperatures, certain hermetic sealing.

These points made the metal container *first* in packaging. If there ever is another package that has *all* these qualifications, we'll be making it!

CONTINENTAL CAN COMPANY

Packaging Headquarters for Industry

LITTLE DROPS OF WATER, LITTLE GRAINS OF SAND

Little drops of water, in the course of time, turn huge rocks into little grains of sand.

The process doesn't stop there. On the little grains of sand, even after conversion into glass, the little drops of water still have a dissolving effect.

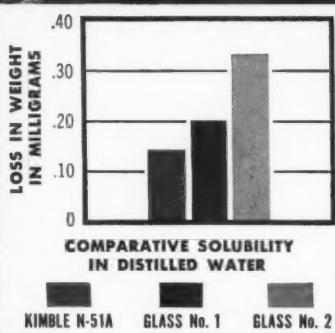
Kimble NEUTRAGLAS (N51A Glass) resists to the highest degree the dissolving effect of distilled water and other chemical attack.

Protect your pharmaceuticals and biologicals to the utmost against deterioration and loss of quality. Standardize NOW on Kimble Ampuls, Serum Vials, Serum Bottles and Clinical Glass Containers made of NEUTRAGLAS (N51A Glass).



For Assurance

ACTUAL PHOTOGRAPH OF SAND TRAIL TO ACOMA, NEW MEXICO



• • • *The Visible Guarantee of Invisible Quality* • • •

KIMBLE GLASS COMPANY • VINELAND, N. J.
NEW YORK • CHICAGO • BALTIMORE • DETROIT • BOSTON • INDIANAPOLIS • SAN FRANCISCO

BAG-IN-BOX

20 YEARS IN 20 WEEKS

THE "Bag-in-Box" is not new, but under the stress of war-time shortages, this packaging method has probably condensed twenty years of technical progress into as many weeks. Through intensive development of available materials, it is now possible to secure a Bag-in-Box that will meet almost any protective requirement.

These improved forms are much more than temporary substitutes. Most of them will remain long after the war is over, for they are not only attractive, practical and economical—but their protective qualities frequently exceed all previous standards.

Many Riegel Papers, new and old, have contributed to this rapid technical progress of the Bag-in-Box, and you will find your folding carton manufacturer thoroughly familiar with their qualities. Call him in now and present your requirements, or write us direct if you wish. Riegel Paper Corporation, 342 Madison Avenue, New York, N. Y.

MUST YOUR PACKAGE BE

MOISTURE-PROOF
MOISTURE-RESISTANT
ODORLESS
WATER-REPELLENT
GREASEPROOF
GAS-PROOF
ANTI-CORROSION
SIFT-PROOF
NON-TOXIC
FAST FROZEN
NON-BREAKABLE

•
A BAG-IN-BOX
WILL DO IT

RIEGEL PAPERS

SYLVANIA* CELLOPHANE



PLANT—FREDERICKSBURG, VA.

for Conservation

THERE never was a time when so much was required of packaging materials. Efficient packaging is to-day one of the largest jobs in American history. Packaging materials must be conserved, yet they must also conserve the products they package, in addition to replacing metals, etc., now required for war purposes.

Manufacturers are exerting every effort to maintain their standard qualities in the face of shortages of material and other enforced war-time restrictions and economies.

Cellophane will long be remembered for the dependable service it is rendering in to-day's war-time emergencies.

SYLVANIA cellophane is manufactured under the most exacting conditions of laboratory research and precision manufacturing. It is the answer to new packaging problems — by itself alone, or in combination with other packaging materials. It will obtain and hold for you a larger sales volume, at the same time effectively conserving materials and avoiding waste.

New types of SYLVANIA cellophane, for new requirements, are constantly being developed. If you have a difficult packaging problem, we offer our technical co-operation.

Buy United States War Bonds and Stamps

SYLVANIA INDUSTRIAL CORPORATION

General Sales Offices: 122 E. 42nd Street, N. Y. Works: Fredericksburg, Va.

Branches or Representatives:

ATLANTA, GA. . 78 Marietta Street
BOSTON, MASS., 201 Devonshire St.
CHICAGO, ILL. . 111 N. Canal Street
DALLAS, TEX., 809 Sante Fe Building
PHILA., PA. . 260 South Broad Street



Pacific Coast:

Blake, Moffitt & Towne
Offices & Warehouses in Principal Cities

Canada:

Victoria Paper & Twine Co., Ltd.
Toronto, Montreal, Halifax

* "SYLVANIA" IS A REGISTERED TRADE MARK FOR CELLULOSE PRODUCTS MANUFACTURED BY SYLVANIA INDUSTRIAL CORPORATION

THIS PLASTIC IS READILY AVAILABLE

FOR ALL WARTIME AND ESSENTIAL CIVILIAN NEEDS

You can secure prompt delivery of BEETLE* (urea-formaldehyde) Plastic Materials for any and all wartime and essential civilian needs under the original WPB Order M-25. Current rumors indicate some confusion and misinformation on this point—due, no doubt, to new orders affecting availability of other types of plastics.

BOTH MOLDING MATERIALS AND BONDING AGENTS ARE AVAILABLE for prompt shipment on receipt of qualified orders. BEETLE, the urea-formaldehyde thermosetting plastic, is an ideal utility material, and its exceptionally good electrical properties make it suitable for a wide range of uses in this field.

There are also supplies of URAC** and MELMAC* Adhesives available for immediate shipment. And no shortage appears imminent. These materials are widely used for bonding of wood, fabric

and paper by hot-press, kiln cure, or cold-set methods.

PRICES HAVE BEEN REDUCED. In order to ease the shortage of other plastics used primarily for electrical and other utilitarian applications, a Grade Two BEETLE in opaque black or brown colors only, is now available in a reduced price range. Qualitatively these two new materials are similar to standard BEETLE. Enlarged plant facilities, designed for the mass-production of these two colors, have made this timely step possible. If you can use black or brown colors in BEETLE, get in touch with your molder or write directly to us for more details.

AMERICAN CYANAMID COMPANY



34 ROCKEFELLER PLAZA, NEW YORK, N. Y.

*Reg. U. S. Pat. Off. **Trademark

Beetle- A CYANAMID PLASTIC



— or How To Tell a Stackler!

STACKERS are people who subscribe to publications but seldom read them. They allow unread copies to pile up on window sills or on top of filing cabinets—wasted circulation for advertisers.

Fortunately stackers don't renew. There is nothing that stays the hand from signing a renewal order and another check as effectively as a pile of unread publications.

According to A.B.C. rules, silence *doesn't* mean consent. Subscriptions up to three months in arrears are reported accordingly in A.B.C. reports and after that the subscriptions are stopped or reported under the heading of "unpaid distribution". Non-readers can get on the list of an A.B.C. paper but few stay on.

This regular report on the extent of reader interest, as expressed by renewals and governed by the advertisers' own definition of paid circulation, is just one of the reasons why a business paper's membership in the Audit Bureau of Circulations is so helpful to both advertisers and publishers.

This business paper is a member of the Bureau. In addition to the percentage of renewals and arrearages, our A.B.C. report tells advertisers how much paid circulation we have,

how it was obtained, how much readers pay for it, where it goes, the business or occupational analysis of subscribers and many other facts that buyers need in order to invest their advertising money most successfully.

SEND THE RIGHT MESSAGE TO THE RIGHT PEOPLE

Paid subscriptions and renewals, as defined by A.B.C. standards, indicate a reader audience that has responded to a publication's editorial appeal. With the interests of readers thus identified, it becomes possible to reach specialized groups effectively with specialized advertising appeals.

MODERN PACKAGING

Member of the Audit Bureau of Circulations



Ask for a copy of our latest A. B. C. report

A. B. C. = AUDIT BUREAU OF CIRCULATIONS = FACTS AS A MEASURE OF CIRCULATION VALUES

You're Able to Label

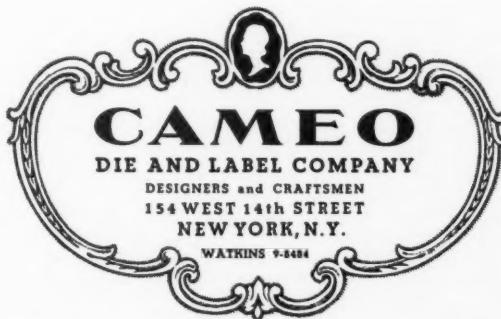


NO SHORTAGE OF } METALLIC SUBSTITUTES
} LABEL-MAKING FACILITIES
} INGENUITY ... AT CAMEO

The embossed and die-cut label tipped on this page is a real "war baby."

It is a product of substitutes and shortages...an example of ingenuity which knows no limitations. It is a product of Cameo creative label-making service. We work in all available materials and bring out the richest effects in each.

We can advise you on the materials to use and the best methods to achieve finest results. We will gladly design a suitable label or seal for your product or service.



IN CANADA: CAMEO METAL SEAL & LABEL CO., LTD., 371 DOWD ST., MONTREAL



INSIDE NEWS

SEPTEMBER

PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y.

1942

A Challenge to American Industry

Success of National Salvage Campaign May Mean Difference Between Victory and Defeat

Most important extra-curricular activity of American industry these days is the nationwide salvaging of scrap iron and steel, rubber, copper, tin, lead, zinc, manila rope and burlap. All out war production has created terrific demands for supplies of these materials.

Particularly critical is the need for scrap iron and steel. Steel mills' inventories of scrap iron and steel have shrunk more than 45 percent over the past 18 months of record-breaking steel production, and now represent an average for the entire steel industry of little more than two weeks' supply at the present rate of consumption. Unless it is possible to get some 6,000,000 tons of scrap iron and steel from other than normal sources, the expanding capacity of the steel industry cannot be fully utilized.

And we need steel for almost every item of modern, mechanized warfare.

Donald M. Nelson and the War Production Board have appealed to American industry to get in the scrap. The WPB has set up Industrial Salvage Committees in some 400 leading cities and is making an industry by industry and plant by plant canvass to get in the scrap. *This involves appointment in each plant of a salvage executive, someone with authority to make a general housecleaning, junking obsolete and worn out equipment.*

Cooperating in the national scrap salvage drive is American Industries Salvage Committee, representing groups of leading industrial

concerns. Through a nationwide advertising and publicity campaign, paid for by the Committee, industry and the general public are being made aware of the urgent need for scrap materials.

Included in the industrial salvage which is being sought are old dies, machine tools, boilers, abandoned rail sidings, elevators, old castings, flywheels and other obsolete and unused machinery. Any metal materials, any of the list of critical materials should be salvaged and salvaged quickly.

The need is vital and immediate. Steel freighters whose keels were actually laid after the attack on Pearl Harbor (and whose plates are made of roughly 50% steel scrap) were completed within three months and carried the bombs across the Pacific that helped to win the Coral Sea Battle in May 1942.

Scrap—and particularly industrial scrap—is everywhere. A major portion of the scrap collected necessarily must come from industrial plants. The success or failure of this vital campaign will depend ultimately upon the vigorous cooperation of American industry, from the greatest industrial plant to the smallest shop.

Go to it. This is your fight—and your opportunity to show the Axis what American "can do" really means. Dig in. We've got a war on our hands—and we've got to win!

(194)

Here's What You Can Do—ACT NOW!

Organize Your Plant

Put someone in charge of salvage in all departments of your business and GIVE HIM AUTHORITY TO ACT. Organize and direct the necessary staff for carrying out the program.

Comb the plant and yards for dormant scrap, unused and abandoned equipment, old boilers, boiler flues, pipe, foundry moulds, obsolete dies and parts, material now being destroyed or burned but which has salvage value, and see that it is disposed of as scrap.

Survey all plant equipment, particularly idle, stand-by or discarded machines, with a view to applying or converting it to useful production.

Speed the return of scrap to mills and refineries through existing channels. Report promptly any equipment which is definitely obsolete, and see that it is disposed of as scrap.

Segregate Your Scrap

Classify scrap and provide separate containers for each class of scrap material.



PRIME SCRAP—Here a heavy drum from an old mine hoist is being cut down to "pan size" for firing in an open hearth furnace. After being fired with equal amounts of pig iron, the long-unused drum will emerge as steel plates for 1942's Liberty Ships.

Dismantle discarded equipment promptly into its component parts. Sort blanks, short ends, cut-downs, clippings, etc.

Separate paper scrap—white and colored, news and book or catalog stock—before sending it to the baler, for greater salvage values.

Sell Your Employees

Devise awards and incentive systems to recognize effective work in the conservation and salvage program.

Work through foremen to reach every machine operator in preventing spoilage and minimizing waste at the source.

Constant reminders in the form of posters, pay envelope enclosures, house organ publicity, etc., are potent aids to the conservation program.

Remember: *Your plant, your operations, the jobs of your employees depend in large measure upon steel production. If U. S. furnaces are to keep going full blast, they must have scrap—by the millions of tons!*

Get in touch with your nearest Regional Headquarters—or The Industrial Salvage Section, Conservation Division, War Production Board, Washington, D. C. (195)

(Advertisement)

BY NATIONAL CAN



SEPTEMBER

PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y.

1942

Lacquers Manufactured From Corn

Many bushels of corn are used annually in the manufacture of lacquer using solvents made from corn. Nearly two bushels of corn are consumed in making the lacquer for a single automobile. Corn in the form of acetone is also used in airplane dopes, paint and varnish removers and synthetic resins. In the form of butanol, corn is used in spirit varnishes and polishes as well as lacquers. Ethyl alcohol from corn is used in lacquers, shellac solutions and polishes. (198)

Wisconsin Will Supply Army With Canned Smelt

Wisconsin, long the canning grounds for fish and other foods, will pack 1,000,000 lbs. of smelt this season for the sole use of the armed forces, employing a new method.

The government has selected a trial factory for canning smelt under its supervision. The new technique, according to an authority of the U. S. Fish and Wild Life Service, is similar to that used in canning sardines. This food expert described the method by saying it consisted of placing the smelt in brine, steaming them and drying and cooling before hand picking. Three tablespoons of corn oil are added before the cans are sealed and then placed in a cooker. He also gave canners information on 2 methods of packing smelt, approved by the federal government, the second varying from the first process only in the brining time. (199)

Nazis Produce Fibers From Casein

Casein-derived fibers are being produced in Germany by a new improved process, it is reported. Rennet casein is the basic material. It is first treated with an alkali and then subjected to a fermentation process. Subsequently, fiber formation is accomplished by spinning the casein solution into a bath of sulphuric acid and sodium sulphate. The threads then pass through sodium chloride and aluminium sulphate baths, and are finally made insoluble by treatment with cold and warm solutions of formaldehyde respectively. (200)

"RESEARCH IS ORGANIZED THINKING"

National Can Corporation's Modern Laboratories Wage a Continual War Against Food Spoilage



A View In The Bacteriological Laboratory

This Laboratory is part of the Research Field Service Division. It is here that spoiled cans of foods are examined to determine causes of spoilage. In the background is a dust-proof room for bacteriological plating work. This Laboratory also conducts research in bacteriological problems involved in the packing of new products. (196)

Food Purchases of U.S. Navy Stagger the Imagination

Buying food for Uncle Sam's Navy was a big enough job in peacetime to make the Bureau of Supplies and Accounts one of the largest purchasers of foodstuffs in the world. But since the two-ocean Navy program got under way the food demands of the sea service have multiplied far beyond any previous levels. Now the Navy is second only to the Army as a customer of U. S. food processors.

For the year ending July 1, for example, the Navy's estimates called for the purchase of some 910,000,000 lb. of food, 12,168,000 dozen eggs and 1,419,600 gallons of sauces, oils and vinegars. Even these estimates fell short of actual purchases.

Among the food purchases for the fleet and the bluejackets ashore in the last 12 months were 43,439,000 lb. of canned vegetables and 18,525,000 lb. of canned fruits. (197)

Technical Topics

NICKEL PLATING of magnesium alloys is accomplished by electrolytic methods by a new process developed by an American chemical manufacturer. The nickel deposits obtained are declared to be soft, adherent, and easily buffed to a high polish. (201)

ZINC TETOXY CHROMATE is the name given to a new pigment said to offer promise in rust-inhibiting primers. It is stated to be less water soluble than regular zinc yellow and therefore produces more water-resistant coating. (202)

WOOL FATS, yielding harder and tougher paints when mixed with beeswax, carnauba, high melting paraffins or resins, make a tenacious, durable protective film which can be applied in very thin coats. English aircraft manufacturers are experimenting with such a lanolin-resin solution. (203)

RESINS—Three new and interesting resins have been found in England. They are Hal resin, Jak tree resin and a gum from Acacia Zacta. A varnish made with Hal resin and turpentine was applied to sized wood on which it dried in about 48 hours to a fairly tough glossy finish. Jak tree resin is practically 100 percent soluble in acetone and the Acacia Zacta appears to be a good substitute for standard gum acacia. (204)

COPPER MERCURIC IODIDE is the basis of a temperature-indicating paint recently described in a British technical journal. The salt is produced by triturating cuprous iodide with mercuric iodide with sufficient water to form a paste, drying, and then grinding, it is declared. (205)

SODIUM DINITRO-ORTHOCRESOL has been shown to eliminate the possibilities of plant infection by killing the fungi in fallen leaves in recent investigations of the Bureau of Plant Industry of the United States Department of Agriculture. It has also been found to be successful for killing fungus galls on cedar trees. (206)

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquirers to the original source of the article. Write to National Can Corp., 110 E. 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

(Advertisement)

NASHUA

THE GUIDE TO WARTIME
Packaging

Current wartime restrictions on inks and chemicals affect every manufacturer of packaging materials. Nashua regards these limitations as a challenge to skill and craftsmanship. Our packaging specialists have already solved many a vexing problem — are solving others — will solve more. The ingenuity that established Nashua supremacy many years ago is double assurance *today* that Nashua will continue to make the most effective use of available materials. It will pay you to submit your packaging problem to Nashua.

NASHUA GUMMED AND COATED PAPER COMPANY
Dept. M9, Nashua, New Hampshire

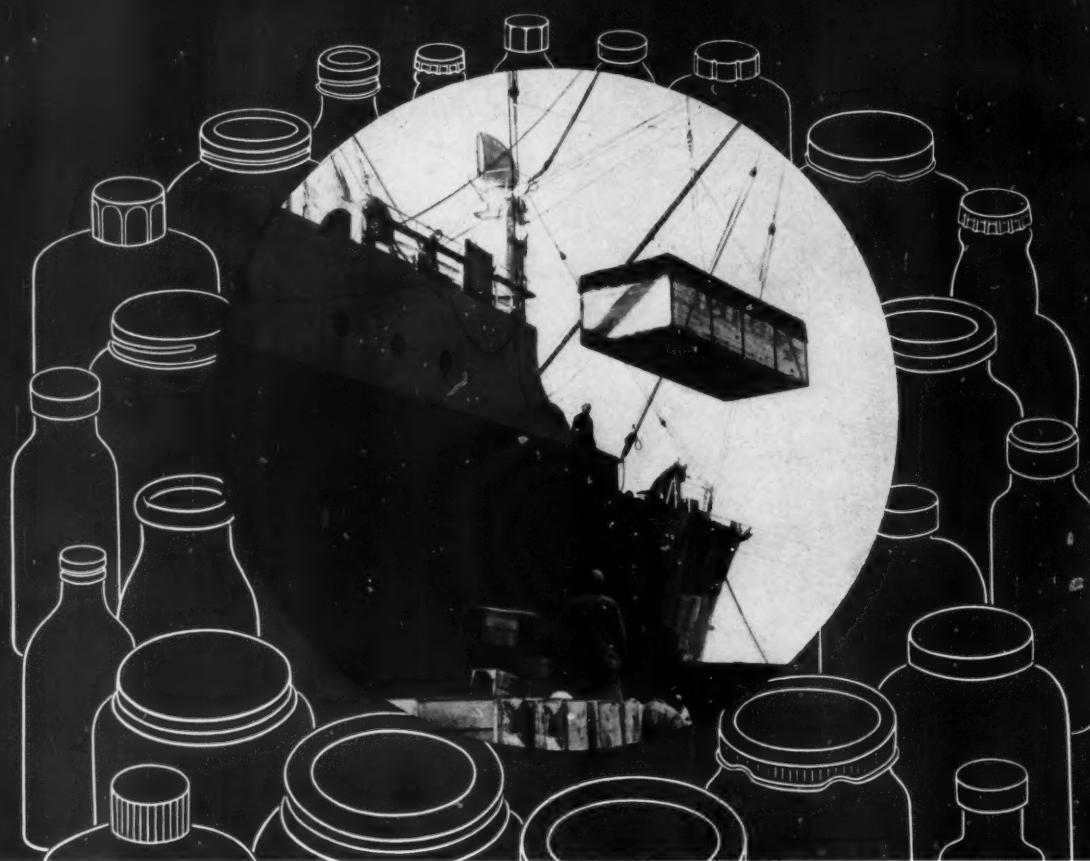
★ BUY U. S. WAR BONDS AND STAMPS ★

MODERN PACKAGING

SEPTEMBER 1942

VOLUME 16

NUMBER 1



Will it be steel for ships or bottle caps?

CLOSURES and the BOTTLENECK

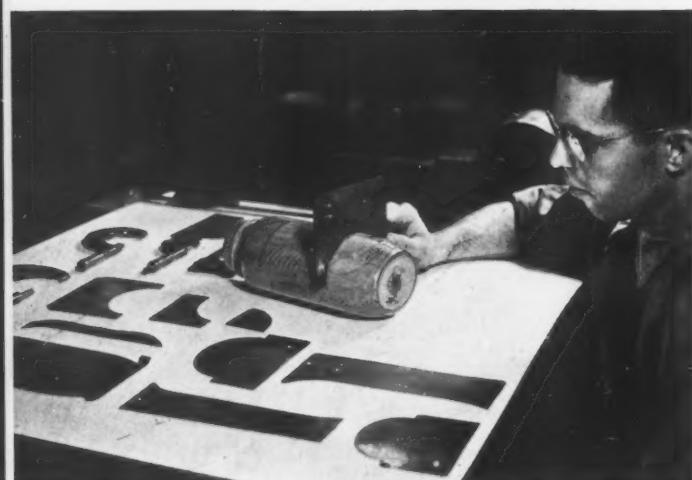
A ship and a bottle cap are made of the same thing—steel! Ordinarily this is an inconsequential relationship. Today the steel in a little bottle cap has started an all-encompassing chain of circumstances that threatens to throw out of gear the whole system of manufacture and distribution of packaged goods dependent upon metal closures for the duration and has a direct bearing on our ability to win the war.

It all began when news broke that shipyards were shutting down for lack of steel and the government had begun a search for places to save steel. Suddenly it was discovered that 225,000 tons of steel were used for closures on glass containers in 1941—enough to build 73 Liberty

ships—when the country was crying for more ships to carry men, planes, tanks and food abroad.

The government needs every pound of steel that can be produced in this country. In an emergency message to the people of the United States urging the nation to collect scrap steel, WPB's Donald M. Nelson said the steel industry had stepped up its production of 67,000,000 tons in 1940 to a record-breaking 83,000,000 tons in 1941, but still this was not enough. A capacity of 90,000,000 tons must be reached—a total equal to the output of the rest of the world combined. This tonnage must be made up somewhere.

One of these "somewheres" is in the packaged goods industry. Can manufacturers and makers



Above. Models for glass containers are first made of wood. Below. Patterning the metal mold from the wood model before actual mold can be made.

of products ordinarily packaged in cans knew this early in the game. They first felt the pinch with the shortage of tin, then with the ever-increasing restrictions on steel for blackplate. It became serious, but many manufacturers with goods to pack in cans thought complacently, "Ah, if worst comes to worst I can use glass." The glass container industry was jubilant. Here was the chance of all time to capitalize on their efforts of years to get more products into glass.

Then came a rude awakening. A glass container without something to close it was not worth a tinker's dam and the material that does the lion's share of the closing was steel. The whole packaging industry was asleep. When the government's call for more steel came, it was caught short with practically no provision for what to use for closures.

The government's first move to cut down the use of metals for closures was Conservation Order M-104, issued April 3, accompanied by subsequent amendments. It is estimated this order will save 40,000 tons of steel. This immediately cut the amount of closures that could be used for malt beverages and non-alcoholic beverages to 60 per cent of the tonnage of tinplate, terneplate and blackplate used for such closures in 1941. Except for existing inventories, it prohibited the use of metal closures for wines and distilled liquors after August 1. It further prohibited the use of cover caps and metal screw bands for two-piece home canning closures, closures for dog foods as well as tinplate and terneplate for chemical and household products for which other closures must be substituted. It prohibited entirely the manufacture of double-shell closures.

Order M-104, however, with all the headaches it entails is really only the beginning of what may happen. Since the nation's eating habits depend greatly on the use of containers for food, the curtailment of metal containers may proceed a step at a time, instead of being accomplished like the automobile industry in one sweeping order, but it's sure to come. There is no doubt how the government's orders will be drawn so far as steel is concerned. If it's a question of ships or closures, the decision will be in favor of ships. No American patriot would have it otherwise, no matter what hardships or dislocations this causes in civilian packaging industry.

The shortage of steel has caused most hardship so far for those manufacturers who must use crown caps for their products, to the wine and liquor people who must use alternate materials and to a large number of other product manufacturers who are now forbidden the use of cans by Order M-81 limiting tinplate and terneplate and Order M-136 limiting further the use of blackplate. These orders affect every manufacturer who has contemplated a switch to glass, but must still have metal closures.

Modern Packaging has been watching this situation for months. The whole picture is still confused and it is not a pretty picture. In it is a vicious circle that includes almost every material used in glass packaging as well as problems of transportation and distribution.

Unfortunately it is likely to become worse before there is a solution. Many substitutes look very promising, but will take months of research before they are practical for mass production. The really hopeful sign is that everybody is at last awake to what is happening. Nothing is ever done until it has to be; then everybody gets busy. On the following pages is presented a re-

view of the current glass and closure situation, in the belief that by bringing this information into the open—airing comments from all sides—it will help to clarify the situation and point the best way to proceed in these difficult times.

HOW MUCH GLASS

Right now, there is no shortage of raw materials—soda ash, silica and lime—to make glass containers. Soda ash is plentiful now since the huge consumption of plate glass by the automobile industry has stopped. A big deposit of natural soda ash has been found in the West, but alkali producers believe it will not be developed right away because of the lack of equipment needed for mining it and the transportation difficulties involved. Soda ash shortage is bound to appear again. Some of this can be offset, however, by limiting the production of glass for non-essential uses—tableware, building blocks, windows—to save glass for containers.

There is no shortage of capacity to make glass containers. According to reports from leading glass companies, the glass furnaces were operating at about 65 to 75 per cent of capacity at the end of July. The glass container industry estimates available capacity of about 94,000,000 gross, which is 24,000,000 gross more than 1941 production of 70,000,000 gross. Production capacity released by WPB restrictions, such as freezing of molds, limitations of packs, etc., is estimated at 7,800,000 gross, which makes a total production capacity of more than 25 per cent above 1941 production levels available for additional glass packaging to take the place of packaging materials now on critical lists. It is also estimated that this total may be raised another two or three million gross as the result of the simplification and standardization program.

The glass container industry is also in a good position to take over a reasonable load from the metal container industry for the duration, if the closure situation is clarified, because of its long-range program of improvement in the making of glass containers. For 10 years or more the glass companies have been working to make stronger containers and lighter weight containers in an effort to compete with the metal container industry for packaging business which is readily adaptable to glass. Molds have been simplified to eliminate sharp-edged corners and panels. This gives additional strength to the modernized glass package. Weights have been reduced from 20 to 60 per cent on many types of glass containers. This factor represents the saving of a

great amount of shipping weight. The program of standardization of sizes and shapes instituted some time back by the Glass Container Assn. has also made possible increased production and faster and easier handling with less lost time for changing molds. A few years back, the glass industry also won a point in its favor in regard to freight rates. Glass packages are now accepted at the same rate per unit of weight as metal containers. They formerly paid more per unit of weight because the railroads maintained that glass required additional care in handling and therefore required a higher rate. This is no longer the case. However, actual weight of glass containers is slightly higher than cans of comparable capacity; thus overall shipping cost is slightly more.

Decoration of molds for glass containers is a highly skilled hand-tooling operation. Simplification speeds production; releases labor for war work.





Above. No new fancy molds like the above will be allowed for the duration. Where such are a merchandising feature, this may be a hardship. Below. Examples of modern, light-weight, standardized "economy" jars adopted for many products to meet requirements of today's glass packaging.

In addition to these improvements, the capacity of the glass container industry has also been speeded up by the government's simplification and standardization program (Order L-103). In May 1941, all glass container molds were frozen to existing shapes. That means that if you have a special mold for your glass packages you could not have a new one designed, or if you wished a new custom mold for a product you could not get it. You would have to continue using your old one or adopt one of standard stock design. When your old ones are worn out, no new material will be granted for new molds. Users will have to adopt standardized stock designs. Glass containers for distilled liquors were limited to four sizes: 1 quart (32 fluid oz.); $\frac{4}{5}$ quart (25.6 fluid oz.); 1 pint (16 fluid oz.) and $\frac{1}{2}$ pint (8 fluid oz.). The manufacture of glass containers for all other liquors (such as cordials, cocktails and specialties)

was limited to capacities of $\frac{1}{2}$ pint (8 oz.) or more. This eliminated miniature sizes. The order also provides that after January 1, 1943, all glass containers for the aforementioned products must be standard containers of these sizes in accordance with government specifications. These are standard round bottles for the quart and fifth sizes and standard flask-type bottles for the pint and half-pint sizes. A similar program of simplification and standardization was put into effect at the same time for malt beverages—beer, ale, porter and stout. These were limited to containers of 12 fluid oz., 1 quart (32 fluid oz.) and one-half gallon (64 fluid oz.) of certain specified glass weight. After the issuance of this order, no molds might be replaced except those specified as standard in the government order. On and after January 1, 1943, only standard glass containers for malt beverages may be produced.

Several purposes are seen behind these orders: By limiting the making of new molds, the government has thus saved the amount of metal needed for the new molds and has released skilled tool makers for war industries. Through standardization of containers, increased production on glass-making machines has been made possible. Less time is required to produce large quantities of the same type containers than to change the machines to accommodate different types of molds.

These orders will naturally work hardships. They have already affected some companies, who have specialized in fancy molds. For example, the many liquor bottles with custom decoration are out. On the other hand, there are many examples of attractive labeling on these standard bottles which in some cases make more beautiful packages and at the same time keep brand identity.

One executive of a glass company believes that simplification and standardization in the end will turn out to be a very good thing. When materials were plentiful, everybody tried so hard to get something different from the other fellow, was so lavish in the use of material, that package design went far beyond the realm of good taste. Standardization will necessitate a return to simplicity and a chance to start over from the beginning with new and more beautiful designs after the war.

GLASS FOR METAL

Producers of glass containers, naturally, are interested in the conversion to glass packaging of products which will stay in glass after the war, rather than the conversion of products to glass packaging which are more readily adaptable to other types of containers. The current critical

steel and tin situation, however, has put into their hands a golden opportunity to put to work the large unused production capacity of the glass container industry for the packaging of so-called essential products in glass containers instead of metal cans. Because of the closure situation this cannot be done without the use of some steel, tin and rubber. The glass container industry has made a good case for itself on this score and shows tremendous savings of metal and other critical materials that could be made by the use of more glass containers.

These savings were presented in a study, "Conservation of Critical Materials through Glass Packaging," made by the War Activities Committee of the Glass Container and Closure Industries to dramatize the savings of metal that could be made by additional glass packaging. It was published during July in a handbook as a definite program based on the original WPB Order M-81 issued in February, which specified the quantity of tinplate, the sizes of cans and the products which could be packed therein, and on the original M-86A, which provided for additional tinplate for certain canned products to be earmarked for the government.

As much as 357,800 tons of steel, enough to build 115 Liberty Ships, might be saved by transferring 40 per cent of the products for which cans are permitted by M-81 and M-86A to glass containers, according to this report, which was prepared primarily for the various sections of WPB concerned with the packaging and distribution of essential products. About 3,800 tons of tin could be saved by the same transfer of products to glass.

This report stated that cans use from 30 to 50 times as much steel and tin as glass containers and their closures use for liquids, and from 6 to 13 times as much for solids. Analysis of products listed in M-81 showed all types are packaged commercially in glass. It also showed that 55 plants canning fruit salad, fruits, vegetables and juices have converted packaging lines to handle glass within the last twelve months; 36 honey and syrup packaging plants are using glass containers; seven companies packaging edible oils use glass; 40 companies who pack dry and liquid chemicals, waxes, polishes, adhesives, insecticides have turned to glass; 62 paint and varnish companies now have glass packages.

The only hitch in the program from a materials standpoint is rubber. Cans require some rubber in the sealing medium around tops and bottoms. To transfer to glass containers 40 per cent of the products for which cans are permitted in M-81 and M-86A, would require more tons of rubber than to package the same products in cans. The situa-

tion, therefore, hinges on whether rubber or steel is more critical—whether the government to save 357,800 tons of steel and 3,800 tons of tin, will be willing to release these few hundred tons of rubber.

A number of products listed in M-81 and M-86A, however, do not require rubber when packed in glass. For example, tomato and vegetable juices, dry powdered products, honey and syrups, shortening and paints are said in the Glass Industries' report to require no rubber at all for the closures. Edible oils and liquids, such as adhesives, alcohol, cements, chemicals, disinfectants, liquid pectin, soaps and waxes, require similar closure fixtures to those on cans. Thus, it would appear that tremendous amounts of metal could be saved by packing these products in glass without using, in these instances, additional rubber.

CONVERSION

In its efforts to provide a glass jar that would compete with a metal can for packaging, the glass container industry has produced a modern, lightweight, standardized, wide-mouthed round jar, usually known in the trade as an "economy" jar. This is only 15 per cent larger in dimension than a can of similar capacity. With slight adjustments to existing equipment in the canning plant, such containers can be used on most standard conveyors, fillers and carton sealing machines.

Retorts can be converted for the mechanical processing of glass packed products, if a more

Drainer-syruper unit in California Packing Corp. plant, Vancouver, Wash. Canning plants can be converted to glass packaging with certain adjustments and additions to existing equipment.



accurate control system is added. In some cases, these retorts can be manually operated, if necessary.

The only new machinery usually required for the transfer is that for applying the screw or lug caps to the jars. Vacuum sealing equipment is not plentiful, according to the Glass Industries' report, "but due to emergency restrictions and seasonal operations many machines are idle or not operating at full capacity and these could be made available." Conveyors and fillers used on can lines can also be adapted to the handling of a glass bottle line for fruit juices and other liquids.

There is some question as to whether glass lines can be operated as fast as can lines. This is most important to large-volume canners who must maintain speed of production. Some closure methods for glass are slower than can sealing operations. Glass is slightly more difficult to handle on conveyor lines, but a great deal has been done to eliminate this by adjustment of conveyor belts, by improvement of the design of the jars to give them better balance and by improving the stresses of the glass by mold simplification.

Cans are usually fed through overhead chutes and approach filling machines in a horizontal position. They are turned upright at the last minute before they enter the filler. Glass containers are usually fed in a vertical position, standing on their bottoms, usually carried from one machine to another on a flat-topped chain conveyor. Modern glass containers like fruit and vegetable jars can be fed through can chutes, providing arrangements are made to avoid excessive shock. Automatic feeding and unscrambling equipment has been devised which will load glass containers at rates of speed that are said to be comparable with can-loading equipment. If a chain feed is used, it is well to allow sufficient space between the containers to prevent jamming.

Companies like California Packing Corp., who adopted glass packaging long before the present shortage occurred, have contributed greatly to the development of glass packaging through the experience of converting their lines. Many large packers today whose biggest proportion of production is the packing of vegetables and fruits for military and Lend-Lease shipments have converted at least one line to glass packaging to keep their brand names alive in civilian markets.

Another metal-saving measure is an immediate drive suggested by the government to get industries other than those restricted to reduce jar openings and to cut down the size of their caps, particularly for wide-mouthed jars. For example, in the food industry, if 75 millimeter caps were

cut down to 60 millimeters, there would be a saving of 35 per cent of the metal used. This, of course, would require not only further simplifications, but standardization of many types of glass container finishes.

CROWN CAPS

A crown cap is the only efficient and inexpensive way to close a bottle of malt or carbonated beverage. Pasteurization of beer brings the pressure up to 80 to 100 lbs. per sq. in. in the bottle. Soda water pressure is about 60 lbs. per sq. in. These facts give some indication of the problem involved. So far there is no practical substitute for a crown cap. Of course, there are ingenious inventions that would do the job, but the trick is to get one that can be adapted economically to existing machinery to handle, say, a million bottles a day. To date this has not been discovered, although one hears many rumors.

It is little wonder then that the beer and carbonated beverage people were in a panic when the government under M-104 reduced the tonnage available for metal crowns for beer and soft drinks to 60 per cent of the amount which was used for 1941 production. This was on top of previous ruling (M-81) that took all beer for domestic sales out of cans. M-104 also limited to 60 per cent the tonnage for closures on glass containers that could be used to replace beer cans.

By rolling the metal a little thinner, the crown cap suppliers have been able to make the allotted tonnage stretch to about 70 per cent of 1941 requirements for beer and carbonated beverages.

Further stretching of the metal for crowns has been achieved by brewers promoting wherever possible the quart bottle in place of the usual 12-oz. bottle. Almost immediately after the crown cap order was announced, advertisements by scores of brewers appeared with headlines such as, "To the Jap Navy—bottoms up!"—"Shoot Caps at the Japs," telling about the quart bottle and how bottle caps had gone to war. Several brewers who have made this switch have reported sales of beer equal to the quantities formerly sold in 12-oz. bottles.

All brewers, however, cannot make this switch. Not more than 50 per cent of the 500 brewers in the country are estimated to have equipment capable of handling the larger size. Notable among these is Anheuser-Busch, largest brewing company in the country. Brewers who cannot change to the 32-oz. bottle are rationing their 12-oz. bottles as far as they will go and depending on draft sales for the rest. This, however, will

not solve the problem, since pumping equipment for retailers is short, new kegs are scarce and metal barrels are out.

Millions of reclaimed bottle caps have been returned to brewers in salvage campaigns. In some places they have been re-used, but to date no practical way of sterilizing the caps or re-shaping them has been discovered that is not too costly. The re-use idea has also had repercussions from the public and at least in five states or more, bottlers have been prohibited from re-using returned caps as a danger to public health.

Several companies attempted to increase the supply of crowns by stamping them out of old No. 10 cans. It was estimated that one such can would produce 144 crown caps and that by this procedure the stockpile of crowns could be raised another 10 per cent. Notable among the companies carrying out this plan was Pepsi-Cola. This company makes its own crowns and was, therefore, in a better position from a machinery standpoint to attempt this program. So far, however, experience has been that the expense of collection, cleaning and machinery for handling the reclaimed cans has made such a process too costly to be considered successful.

Brewers and bottlers, however, have another problem which may eventually become a much more serious threat to their business than scarcity of metal for crowns. It is the transportation situation. Late in July the government eliminated from the new tire eligibility list all privately operated trucks carrying alcoholic beverages, soft drinks and similar beverages. This in itself will limit the number of miles as well as the number of trips made by the trucks of these companies. If this becomes a bad problem, the allotted metal for crowns might well be adequate to provide closures for the amount of production for which distribution facilities are available.

Cork for crown liners is not too plentiful, but even if it becomes impossible to get cork for this purpose, it is not impossible to use various types of coated paper liners for crown caps.

One brewer is reported to be testing out the use of a 5-gal. container to reduce the number of caps used. In industrial areas over week-ends large quantities of beer are purchased and it is claimed that in such centers there would be no consumer obstacle to this large-size container for large weekend parties.

The wine and liquor industry last year used about 8,000 tons of steel for closures. After August 1, that use for steel was cut, except for closures manufactured or in process of manufacture for this purpose on or before May 31, 1942. Many wineries and distillers, however, appear to have



Brewers are educating the public to the shortage of crown caps and the switch to quart beer bottles.

in their stockpiles enough material for closures to cover their present packaging needs at least until the end of the year and some of them for a good way into 1943.

CLOSURES FOR SPIRITS

Last year, only 10 per cent of the closures used for wine and liquor were made of plastic material, most of it phenolics. Some urea was used, but urea was regarded as too expensive. Screw closures of either phenolic or urea from a functional standpoint are efficient for wines and liquors. Under normal conditions, the liquor industry would turn to this source. Today, this is not simple. Phenolic materials are guarded under the strictest priorities, because they are essential to hundreds of war uses. There is none to spare for what might be regarded as non-essential civilian economy. Ureas at the moment are plentiful, but the demand for them, as soon as it becomes generally known that they are obtainable, will be great. It is doubtful whether they can be spread out far enough to cover the entire demands for metal closures which they must replace. Therefore, industries which can make use of urea should make plans for obtaining their closures now. To wait is to be left without any. Wine and liquor industries use for the most part 24 to 28 milli-



Standard quart, fifth and pint bottles for liquor as specified in WPB Order L-103. All distillers will be required to use these after January 1, 1943. A half-pint size, similar to the flask-type pint, is also permissible. Schenley bottles at left are both fifths. Each has the same content. The taller one with the word "Schenley" as part of the mold decoration was replaced by the shorter one in the company's own simplification program. After January 1, however, the shorter one will be replaced by the L-103 fifth.

meter caps. There is a trend toward the use of $\frac{1}{2}$ -gal. jugs, particularly for wines, to save caps. However, these larger containers require 38 millimeter closures. These are not made of plastics at the present time and would require tooling. In the glass closure division of WPB there is a feeling that A-1-A priorities for tools could be obtained for this purpose to make use of ureas.

Liquor and wine bottles can be stopped with friction closures of cork, but cork comes mostly from Portugal, Spain and Africa and not enough of the imports will be allotted for closures to cover requirements. Last year the wine and liquor industry used about 275,000,000 corks.

That leaves wood and paper as the remaining substitutes. So far for liquor and wine closures, these substitutes are only hopeful gleams in the inventors' eyes. The only thing that can be said is that everybody who has a laboratory is burning the midnight oil to find the successful answer. One large distiller reported a try-out of wooden closures. Leakers were said to be 6 per cent and about 1 per cent of the caps split.

WHAT ABOUT PLASTICS

Last year the entire glass container industry used about 15,000,000 lbs. of plastics for closures, split 70 per cent phenolics and 30 per cent ureas, according to an estimate of a WPB official. To replace metal closures exclusive of those used for process foods and for home canning, which of necessity must be of metal, would require 50,000,000 lbs. of plastic molding powder. In other

words, this means roughly about 4,200,000,000 closures for wines, beverages, whiskeys, cosmetics, toiletries, dry chemicals, foods such as spices and vinegar, and paints and varnishes. (It does not include replacement for any crown caps, which is impractical.) It means about 20,000,000 lbs. of plastics for the wine and liquor industry alone. It means a replacement with something like an equal amount of molding powder to replace 7,000 tons of metal used for closures by the cosmetic and toilet goods industry, which will be drastically limited in the use of terneplate and blackplate.

To think of it in terms of phenolics is wishful thinking. The only material available for replacement is urea. Fortunately, ureas at the moment are plentiful. If you have a closure problem that can be solved with urea, you should hustle to build up a stockpile, while the condition of plenty lasts. There is actually a surplus of urea compounds at this writing, caused by the dislocation of civilian industry. In normal times, some of the largest uses for urea compounds are for automotive parts, radios, lighting sockets, household utensils, stoves, refrigerators, clocks, bathroom fixtures, kitchenware. Under present restrictions, the uses for ureas are limited almost entirely to buttons and closures. Normal peacetime uses have been cut off by the freezing of civilian production in many lines of manufacture. Another contributing factor to the present surplus of urea is the expanded capacity for the making of these materials during the past year. Last year 15,000,000 lbs. of urea were produced. This year, the leaders of this industry say they have capacity to produce 30,000,000 lbs.

Urea manufacturers estimate that at least 20,000,000 lbs., possibly more, of this can be released for closure manufacture. At this writing, they are actually looking for business. One manufacturer also said that he didn't believe it would be impossible to stretch production even further, if demand warranted.

However, this should not be regarded too optimistically. Conservative estimates are that present urea capacity will have to be increased two-and-one-half times to supply the 50,000,000 lbs. of plastics required for closure replacements.

It must be remembered, too, that urea production requires ammonia and formaldehyde. At present, these are in a comfortable position. Only about 2,000 lbs. of ammonia are required for the production of some 17,000,000 lbs. of urea molding compounds and there are plenty of plants with ample capacity. Formaldehyde is plentiful and has been in a free position for the last four months. Methanol is the principal product in anti-freeze solutions, but in view of the automobile situation,

this use has dropped to zero. Wood flour, which makes up 40 per cent of the product, is very plentiful. However, the ammonia and formaldehyde situation can change over night, depending upon the government's need for these two gases in explosive plants.

Another hurdle, even if urea production could be stepped up, is that of sufficient molding equipment. From a technological standpoint, the same equipment can be used interchangeably for molding either phenolic or urea compounds. In plants where there are multiple-head rotary molding machines for the making of closures, both compounds are now being used on the same presses. Either new closure molding equipment or adaptation of existing equipment, however, would have to be made, before sufficient capacity could be put into operation and the required demand for plastic closures supplied. It is not impossible, but it will take time, it will cost money and it will take steel for new molds which the government has shown a willingness to release if it can be demonstrated that such a release will mean a substantial saving of steel. If such a plan is adopted, some authorities feel that it should be undertaken on a sub-contract basis. That is, the leading manufacturers of plastic closures should be assigned to the job and work with other molders on a sub-contract basis. In this way, they say, the experience and technical knowledge of the plastic closure molders would be made available to all. There would not be the delays, expense and lost motion of each one trying to work alone.

Price of urea compounds has always been a factor in their use for closures. Current average price for black and brown phenolic compounds is about 14 to 15 cents a pound; black and brown ureas, 22 to 24 cents a pound. For products like wines and liquors this price differential weighed against the cost of the packaged unit is not so important and can easily be absorbed in the over-all sales price. This difference is a handicap for low-priced items, where the addition of a fraction of a cent means the difference between profit and loss, and would be more important under ceiling prices.

The urea producers have worked very hard to get their price down and the current price for the black and brown closures now being made represents a great reduction over the brilliantly colored urea compounds which sell at about 35 cents a pound. The companies are able to produce the black and brown compounds at this lower figure for several reasons: 1. They require a less expensive filler, because irregularities in this do not show up in opaque black and brown material. 2. Reduction of the number of colors eliminates the need for clean-up in the plants when changing

presses from one color to another, a time and labor-consuming operation.

Urea has certain advantages for use as closure material: It is tasteless, odorless, light-fast, resistant to alcohol and doesn't "bleed" in alcohol.

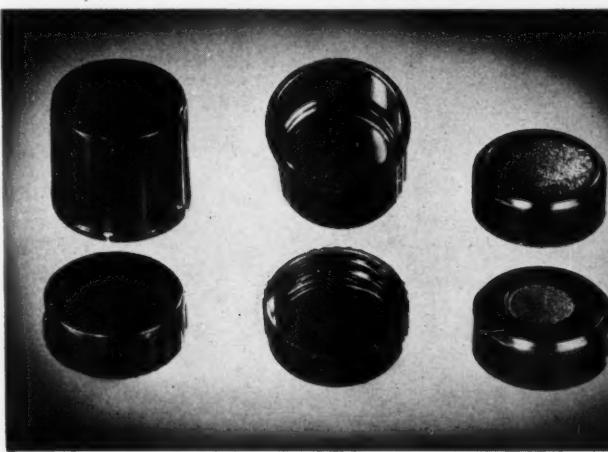
SUBSTITUTES

In the opinion of Dr. Julian H. Toulouse, Consultant for the Glass Containers and Closures Branch of WPB, nothing except metal will hold up during the processing of foods done in a pressure cooker at 240 degrees temperature. Paper will disintegrate; wood will absorb moisture and split, not at once but over a sustained length of time; plastics will crack and are too expensive. There is a strong possibility that non-processed foods would undergo a change in taste with use of a substitute closure. This means that for the time being, there is little chance of a substitute for closures on many food products.

Wood.—Because it is plentiful, wood offers a practical substitute possibility if the disadvantages and weaknesses can be surmounted: (1) Inaccuracies of the thread, (2) prevention of shrinkage and splitting, (3) reduction of cost of handling, (4) location of sufficient wood-turning equipment, (5) difficulty of gluing in liners, (6) excessive cost. One of the outstanding plants in the country has facilities to produce large quantities in the 28-millimeter size. These would cost about \$20 per thousand in comparison with \$4.50 per thousand for plastic caps formerly used.

According to R. P. A. Johnson, Timber Consultant for WPB, available woods for closures in-

Plastic materials can be saved by reducing skirts of closures. Further savings can be made by reducing thickness of closure. Short-skirted closure (right above) contains 7.48 grams. One below it, 6.48 grams.





Cork comes mostly from Spain and Portugal. Bark is stripped from the cork tree, an operation which takes place once about every eight or ten years.

clude white oak, yellow poplar, yellow birch, red gum, maple. Others may be used but are not so readily available, such as magnolia, cherry, black walnut. White oak is best suited for closures because it is close, or tight grained, and liquids will not penetrate it. No restriction has been placed on the use of wood and it is plentiful.

Yellow poplar is used almost exclusively for bungs and is readily adaptable for closures. Yellow birch is not quite so practical for closures because it is very porous and unless combined with a sealer, there is greater chance for leakage. Red gum is the most plentiful of the hardwoods and would probably serve well as a stopper. It has been used for bungs, but because of its cross-grain is difficult to work. Maple has a hard texture and would make a good closure. These woods are all indigenous to the United States.

Closures have been suggested as a practical use for gun-stock waste. One big wood-working company has a large order for gun stocks and has asked WPB's advice on what to do with the waste. Mr. Johnston did not know of any concern that was using gun-stock waste for the manufacture of closures, but said it certainly offered a large potential supply for a large quantity of material.

Paper.—Successful paper closures for milk bottles have been made for years. Similar ones are being used more and more widely for such products as cottage cheese, packed in tumblers.

This product is distributed usually on a day-to-day basis and does not have to be protected for long shipping and shelf life.

The J. T. & A. Hamilton Glass Co., Pittsburgh, has introduced a cap made of specially treated paper, which they claim is suitable for packaging such products as vaseline, cold cream, ointments, hair preparations, candy, hand lotion, salves, vanishing cream and similar items. The company arrived at this idea after many years' experience in manufacturing milk bottles. New application of the paper closure has helped the company to retain certain cosmetic, candy, salve and miscellaneous accounts which might easily have been lost or at least seriously curtailed because of limitations on metal closures. J. T. Hamilton, president of the company, said that 19 firms in the Pittsburgh area are now using this cap. Standard milk-bottle finish is applied to jars for this purpose and both the cover-all and plug-type paper caps are used, depending upon the shape of the bottle or jar. Cottage cheese covers, for example, have been substituted effectively for screw metal caps on vanishing cream, face cream, shoe polish, furniture polish, wax and other packages. Plug-type caps for liquids with a high-melting point are being used by cosmetic manufacturers and also to some extent by the local drug manufacturing industry. The caps have been recommended in several standard sizes, including 45, 48, 51 and 56 millimeters. Most of the products thus packed are said to have shipped well and arrived in good condition. The company does not recommend these caps, of course, for perishable products.

Another supplier claims "almost ready" a paper screw closure which is being tested to satisfy requirements for rigidity, moisture-proof qualities and durability. Sizes range from 24 millimeters to 70 millimeters. A small machine, capable of turning out a minimum of 2,400 of these caps per hour is being perfected. Coating materials can be varied to suit contents. Caps can be printed, lithographed or covered with decorative paper. It is claimed that they will be adaptable to rapid machine handling on packaging lines, will withstand pressure of 130 lbs., probably will have loaded threads. The material used for this loading was not revealed. Each machine to make the caps will require 221 lbs. of steel. That may be the bug.

One of the most promising paper caps, it is said, can be made by use of an automatic thread-rolling device, with threads loaded to prevent their smashing when applied to the neck of a glass container. This manufacturer claims that the caps can be made at the rate of 50 per minute and

that, since they are made entirely of paper and glue or other suitable adhesives, will use up no critical materials. The paper cap is treated to eliminate moisture.

All of this sounds good, but to produce either of the last two-mentioned caps on automatic machinery is a different matter. Whether the WPB will release metal to make the machinery is another. Whether the caps will hold up on high-speed production lines is still another problem. More experiment and testing are necessary.

Glass.—It is perfectly possible to make glass closures of various types, either screw caps similar to those on glass salt and pepper shakers, or side seal closures. The difficulty is to provide proper tolerance of the threads or proper seal. More experiment is necessary.

First efforts of several companies along this line were in the direction of a blown glass cap, but this was found entirely impractical. Pressed glass caps were found to be much better, particularly in smaller sizes. If glass caps were adopted, it would mean changing all finishes on glass containers. Another difficulty would be handling glass closures without breakage in the hoppers of high-speed capping machinery. At best these could only be used at first in hand operations.

One manufacturer has done some interesting work on a simple glass disc cap, which is recommended as suitable for vacuum packing. The liner is inserted into the glass disc and the cap pressed onto the container. This cap uses no rubber gasket, but instead a new substitute material. Here again, the trouble is that it would involve new machinery and necessitate a change in design of containers to accommodate this type of cap, all of which leads to the inevitable conclusion that it is a long way from commercial realization.

Rubber.—The use of rubber gaskets is a very important part of a closure for processed foods. So far no adequate compound has been made without rubber for this purpose. Several concerns have made substitute compounds which work pretty well for vacuum packs, such as coffee, but the problem is to make a sealing compound to withstand temperatures to 250 deg. F. for sterilized products. The developments are so near completion, however, they might well be announced any day. This is true of many developments suggested on these pages.

Miscellaneous Possibilities.—Another promising material is something not paper or plastics, but a combination of the two. It has a base made from wastepaper stock put together with certain binders of non-critical materials. Other experiments are being made with wood flour, redwood flour,

porcelain, molded pulp, but in all cases there are limitations and months of laboratory development required before any of these developments can even be considered for practical application.

CORK IMPORTS

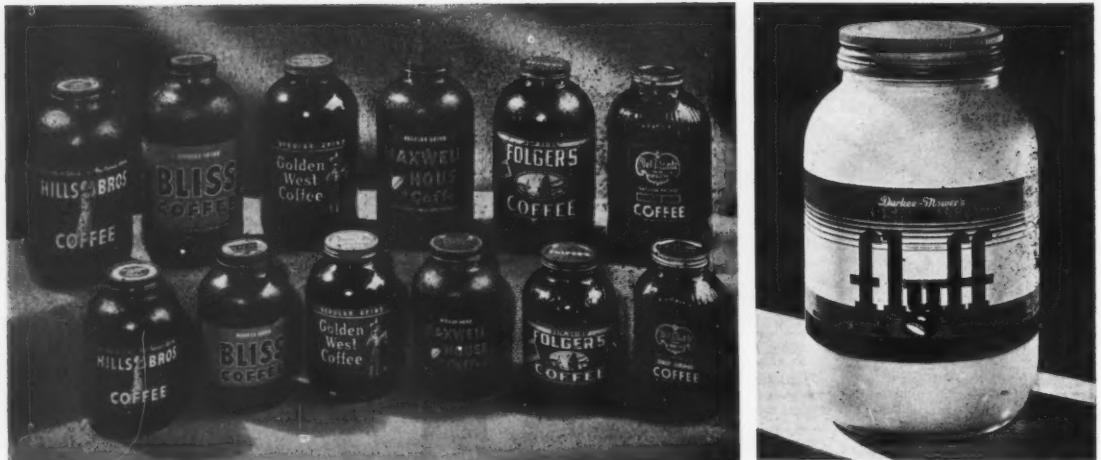
Cork is imported from Portugal, Spain and Africa. According to the Cork and Asbestos Division of WPB imports for 1942 will be about half of those in 1941. The nation has at present fairly good stockpiles of cork and cork wood. At present, closure and stopper manufacturers receive allotments of cork amounting to about 80 to 85 per cent of the quantity used in 1941.

As long as cork comes in, it will probably be rationed in proportion to the quantity of imports. Imports, however, could be cut off almost overnight in wartime. As of July 15, WPB was actually drafting an order restricting the use of cork for closures. Whether this is ever released or not, the present supply will not be enough to provide all past requirements and certainly not enough to cover any replacements of other materials which have already been restricted.

Reclaiming of cork for stoppers or liners is said to be impractical, since the cork has to be sterilized in autoclaves where it is subjected to steep. In such process, cork loses its natural resin and becomes very brittle. It has been suggested,

Group of special mold bottles on lower shelf. Simplified round bottles on upper shelf demonstrate how brand identity may be retained. New round bottles facilitate mass production by eliminating mold changes and thus effecting a saving in glass.





however, that at least champagne corks can be reclaimed by grinding and re-using for gaskets.

The importance of the cork supply can be realized when it is known that the wine industry in 1941 used 75,000,000 corks and 375,000,000 screw caps; the spirited liquor industry, 199,000,000 cork stoppers and 750,000,000 screw caps.

Several developments have been reported for growing cork in this country and one company in a southern state is making a substitute cork from the roots of ordinary scrub palmetto. This substitute, however, is only available for military uses. The U. S. Department of Agriculture, through the Forest Service, is investigating possible emergency sources of cork. Native Douglas fir and white fir of the Southwest have corky materials in their bark which may prove a source of cork for certain uses. Shipments of cork acorns from Spain have also been sent to experiment stations in the Southwest for experimental planting.

Charles E. McManus, president of Crown Cork and Seal Co., has made outstanding progress in a

The government is likely to tighten restrictions on metal for vacuum-pack coffee jar closures. Coffee packers are working on substitutes. A test run of paper closures for this purpose was reported as this went to press. These fine glass packages of peanut butter and marshmallow might have to be changed eventually to smaller-mouthed jars using less metal for the closure, unless a substitute can be found.

program to develop a domestic source of cork in California. Tests have shown this cork to be of excellent quality and plans are going forward for the planting of some 50,000 cork seedlings this year. However, trees take time to grow and, barring all other hazards of such development, no great tonnage can be expected from this enterprise for many years to come.

IN WASHINGTON

Materials for war come first and the whole purpose of the WPB is to see that they are first. If anything is left over after war requirements, it can be allocated to civilian industry. If there isn't enough steel for bottle caps, then there won't be any bottle caps. If it's a question of ships or soda pop, planes or peanut butter, bombers or beer, then the public will just have to get along without soda pop, peanut butter and beer.

No American citizen is unsympathetic with this purpose and businessmen generally feel that the colossal problems dumped on the WPB in the space of a few short months have been handled well. There is a general opinion, however, that the various divisions in Washington do not work together very well, that each branch or section sees only one small part of the whole picture, that there should be greater coordination before orders are issued.

Up to this time, whenever a shortage looms, the policy apparently has been to put through an order

quickly to see how it works and where it pinches. This is bad when statistics on sources of materials are inadequate due to lack of coordination. It creates panic as it did in the paper situation; first by creating an unwarranted buying wave, a speed-up of production and piling up of inventories, then an actual slump due to surplus production and inventory. This same thing has happened in instances of several other materials. It is happening in the rubber situation. No one government agency has its complete hold of all rubber facts and until it does, there will be no real light on the whole problem.

This confusion—with shortage one day and relaxing of restrictions the next, with one group receiving a high priority rating one day; another, the next—is disconcerting and undermines confidence.

On the other hand, industry is by no means cooperating to the fullest extent. Jealous of any new development or any new way to do things in these difficult times, each industry is reluctant to release any data which might help the whole picture for fear of giving information to its competitors. This is understandable, but it sometimes becomes a fetish.

A meeting of closure people in Washington on July 14 has been spoken of by those who attended as one of the most helpful they have attended since the whole system of priority control started. It was good, because it brought together to discuss mutual problems a group from all fields of the glass and closure industry. The consensus of those present was that there should be more of this and also more of it among members of the WPB agencies themselves.

One of the ideas to come out of this was the possibility of a meeting with the Glass Closure Division for simplification of all caps in order to save materials, to plan the elimination of all long-skirted caps and to standardize all bottle finishes to accommodate shallow caps.

As never before, there is a desire on both sides to cooperate and a feeling that there must be the proper give and take or nobody will get anywhere.

SALVAGE CAMPAIGNS

Serious consideration is being given to a salvage program for closures. General opinion is that salvage of closures, provided they are standardized, is not an insurmountable problem. However, the technical problems involved are tremendous: (1) the method of collection, (2) problem of sorting various sizes and types, (3) remov-

ing liners, (4) sterilization and reconditioning, (5) excessive cost.

Collection of reclaimed caps was tried by the users of crown caps. This has not been too successful due to the difficulties of sterilization and re-shaping the caps, because of retail cheating troubles and unfavorable consumer reaction to the re-used caps. It was found that some retailers were using the "reclaimed" cap story as a claim for a high percentage of leakers which they demanded to have replaced. In fact, the troubles are so great on many of these scores that some brewers refuse entirely to use a reclaimed cap. They say a product that goes out under their name must measure up to certain standards. They've built up public confidence and they would rather produce less of their product than send it out with an anonymous cap which they can't vouch for.

Metal screw and lug caps might be returned and reclaimed as scrap metal or some plan might be worked out for re-using screw caps. However, the difference in sizes and the variations in tolerances of the threads as well as sterilization present serious obstacles.

It has been said that plastic caps lend themselves well to salvage and it has been suggested that a popular campaign be undertaken similar to the collapsible tube reclamation plan—that is, no new package without turning in the closure from the old one. From the standpoint of tin recovery the collapsible tube campaign has been quite successful. Since April 1 approximately 400,000 lbs. of tin and other critical materials, which in normal times would have been thrown away, have been added to the nation's stockpile, according to W. M. Rose, president of the Tin Salvage Institute.

Recovery of plastic closures on collapsible tubes, however, has not proved so gratifying. In the first place, it means the cost of sorting, washing and sterilizing these millions of caps. The difficulty of sorting alone can be appreciated when it is realized that the difference of a thousandth of an inch in the tolerance of the threads of collapsible tube caps makes the difference between a cap that fits or one that doesn't. One toothpaste manufacturer, for example, may purchase his caps from two different suppliers. To all appearances these caps look alike, are used on the same package, yet slight adjustments have to be made in the manufacture of the tubes to make the threads fit each of the different suppliers' caps.

This situation might not be the same in fitting larger type caps to various bottles. Liquor bottle screw caps, for instance, might fit on any standard bottle they were designed to close, but until accurate standardization of all bottle caps and

glass container finishes is accomplished, this sorting would be a terrific problem.

It has been suggested that the public be asked to retain the closures they now have for various products, that products be sold with some sort of temporary closure of paper or wood and that the purchaser put on an old cap from an old container to protect the contents in his own home. In this way nobody would be using anybody else's closure. If it were dirty, it would be his own dirt. This might work for products which could be packaged this way. However, it would have merchandising limitations, because it would mean the consumer would have to buy the same brand he bought before in order to make the closure fit. There would be no chance of developing new markets, but if the freezing of civilian production continues, there might not be new markets anyway!

The Conservation Department of WPB has worked out no plan for closure salvage and is holding any plans in abeyance, because closure people have made no study to determine whether such a plan is practical. When and if they made such a study, it would be placed before the Salvage Section for appropriate action. This Division is not likely to act until such a survey is made.

CONSUMER REACTION

When the quart beer bottles were announced to save caps, there was considerable speculation as to how consumers would take this change. "Nobody is going to open a quart bottle every time he wants a glass of beer," it was said. "Women won't carry these heavy bottles home from the grocery when they have no gas to do their shopping by car." "The bottles won't fit in refrigerators." "If you use only a portion of the contents, the remainder will go flat before you get a chance to use it." And so on.

Some of this is sound reasoning, perhaps. Some of it specious. It doesn't matter. The fact remains that there are not enough crown caps. The consumer will take the larger size and like it or go without bottled beer. Most people know that such measures are due to war conditions. They will accept them patriotically as their part in winning the war. Wise advertisers have used this appeal in their advertising. Brewers, particularly, have done a splendid job of educating the public to the need for the change to quart bottles. M. & F. Schaefer Brewing Co. has done an extensive job along this line, even to getting out folders telling how to cork beer after the cap has been removed to protect the unused contents properly for later use. The quart bottles may

have an adverse effect on beer sales and they may not. So far they have not. It all depends on how badly the public wants beer and how much beer there is to go around. If there is a scarcity of beer or anything else, civilians will be glad to get what there is.

There will be little chance to give much consideration to consumer reaction to packaging that has to be changed. The important thing will be materials available to package it.

In the home, modern glass jars have an excellent re-use feature, especially today when the government is urging the preserving of food supplies by home canning. Owens-Illinois is promoting this re-use feature by the introduction of what they call the "Thrifty-Lid," a new closure feature for coffee jars to make them re-usable for home canning. This lid is a separate metal lid available in groceries to housewives with every jar of glass coffee purchased. The original cap of the jar carries instructions for re-use with the extra lid. The "Thrifty-Lid" is made to fit standardized 63-millimeter jars, goes on first and is pressed into place by screwing on the original lid. This supplies sufficient pressure to make an air-tight closure. By the time the jar is cool, an internal vacuum has been formed and the outer cap may be removed.

FUTURE CHANGES

Coffee.—Coffee can be packed in bags and cartons—perhaps not for quite such long shelf life, but long enough to move it through the channels of distribution. For that reason, the government is not likely to release needed steel to continue the packaging of coffee in glass, not even for closures on glass containers.

In an effort to retain their glass containers for coffee, the packers of this product were among the first to adopt some of the rubber substitute gaskets required for the vacuum pack. Hills Bros. and Folger's changed successfully from rubber-lined caps to other types of liners and were pleased with the vacuum obtained by the substitute sealing compounds. Beech-Nut also had packages on the market using rubber substitute gaskets. Hills Bros. have also experimented with a pulp and paper disc gasket to take the place of rubber. The paraffin coated disc, when inserted in the closure, is said to make the glass jar air-tight and in addition is economical. Others have experimented with this type of closure.

The restriction of metal cans and metal closures for coffee will affect most those coffee roasters who have national distribution of packaged brands.

To chain stores that distribute from various roasting centers located throughout the country, this would not be quite so serious a problem, because bag-packed coffee is just as suitable for their purposes, especially if it is sold in bean form and ground in the local retail outlet. Naturally, advertised brands might eventually have to be sold in the bean form.

The whole coffee situation, however, may depend on the number of ships for importing it from South America. Drastic curtailment of imports would solve the packaging problem in a hurry.

Fruits and Vegetables.—Volume of fruit and vegetable packs will be continued in cans as long as metal is permitted. However, more and more glass lines are being introduced and, as has been stated earlier in this article, many large packers have converted one or more packaging lines to glass in spite of its somewhat higher cost in order to assure the continuance of brand names by this means of packaging should metal become scarcer for products sold to civilian markets.

Prepared Foods.—Products such as mayonnaise and peanut butter might have tough sledding. The government is likely to regard packaging materials for items like mayonnaise, which can be made in the home, as non-essential. Also, they might say the nation could exist without packaged peanut butter. The latter, of course, could be sold in bulk, but to package it needs a closure that will protect the ingredient oils from turning rancid. Griggs, Cooper & Co., Minneapolis, are putting up mincemeat, preserves and jellies in wooden pails.

Drugs and Chemicals.—Double-shell closures, of course, are out, but so far there has been no difficulty in obtaining closures for medicinal products. Sizes will be fewer, bottle mouths will be narrower to cut down on the amount of metal and plastics necessary for closures. There is a trend to the use of two or three standardized caps.

Cosmetics.—Order L-171 limits the manufacture of toiletries and cosmetics and the number of marketable units that can be sold on certain percentages of 1941 production and sales. This will naturally cut down the number of sizes, particularly small sizes, which are the backbone of the syndicate store cosmetic business. So far these restrictions do not appear to be drastic enough to cause a complete disruption of present merchandising procedure in this field, but could disrupt business if more drastic restrictions were put into effect. Some packagers of face creams, lotions, nail polishes, deodorants, etc., depend for 50 to 75 per cent of their business on small sizes sold in ten-cent stores. If that source of revenue were



Three familiar products recently changed over to glass packaging. They represent tremendous savings of metal, but the future of their closures is still uncertain. In addition to saving metal, the Nescafé package saves rubber formerly used as a cap liner for the can. This hygroscopic product is protected in the glass container by an inner seal of protective film of non-critical material.



Old and new packages for Pratt & Lambert, Inc., paints. Sixty-two paints and varnishes are now in glass.

cut off, it would mean a terrific loss of business to manufacturers, syndicate store operators and to suppliers of packaging materials. Such situations have already been felt in the collapsible tube field. One large manufacturer of toothpaste has not been making ten-cent sizes since the first of the year. This has been a big loss not only to producer, but to the manufacturer of tubes, who is selling about half as many tubes to the company in spite of the fact that at present he has an ample supply of metal and his company is operating about 50 per cent of normal. There are some other companies, however, in the cosmetic field to whom the elimination of small sizes will be an advantage. One company told us, for example, they would be glad of this chance to discontinue small sizes, because in their lines, the small packages have not proved profitable.

It is quite possible that paper and wood closures can be satisfactorily worked out for many cosmetic lines. Many of the large companies, too, have adequate stockpiles to carry them along for at least another six months or a year.

Shortenings.—These products must be out of metal by October 1. The changeover in many cases is to glass and some of these new packages are already on the market. Indication that the use of glass is presenting difficulties, possibly those concerned with closures, is shown by the fact that several companies who were practically ready to announce their new glass packages are withholding publicity. They say if they were to give releases now, they would not be sure the information would be correct by the time this is published.

These are strange times. What seems a fact today, may be a fancy tomorrow. Whenever loose ends are put together, somebody moves the ends. It is hard to plan ahead. Yet there are a few things in the closure situation that seem certain.

CONCLUSION

1. To think there will be sufficient metal for closures is to live in a fool's paradise. Steel is needed for ships, tanks and planes. There won't be enough for normal civilian requirements.
 2. If you have anything to package that will require closures, start making emergency plans now, no matter how big your stockpile. Think in terms of every possible material that is not on critical lists, because metal will not be available.
 3. If you can use plastic closures for your product, build up your stockpile of urea closures. Don't wait. There is plenty now, but this supply may not last.
 4. Remember that Washington is as disturbed about these problems as you are. WPB is anxious to keep civilian industry going. You can help this along by cooperating within your own industry. If you need certain critical material, such as metal, for new molds or machinery conversion, you are more likely to get it, for example, if you can show figures that by the use of such material, you will save a greater amount of the same or other critical material.
 5. Nobody is more anxious to release information about substitutes than Modern Packaging and whenever there is anything practical, workable, commercially feasible, you will find it reported in the columns of this publication. We are in touch with hundreds of companies, watching constantly every new development. While many of these show great promise, very few are yet out of the laboratory stage. However, when things have to be done, ingenuity always comes to the fore.

Credit: Photos for this article, courtesy of Anchor Hocking Glass Corp., Ferdinand Gutmann & Co., Hazel-Atlas Glass Co., Mundet Cork Corp., Owens-Illinois Glass Co., Armstrong Cork Co.

Cork a quart

Package changes due to shortages of container materials call for more and more consumer education and explanation about how to use these wartime packages.

Government rationing of bottle caps for beer and carbonated beverages and the growing use of the quart bottle to replace the 12-oz. bottle put brewers in the vanguard of those industries with an educational problem on their hands for new packaging. The way brewers have met this problem of re-forming consumer habits may be illustrated best, perhaps, by a case history of such a program carried out by the F. & M. Schaefer Brewing Co.

After long and careful thought, this company decided to switch entirely to quarts for home consumption trade. With the exception of a "handful of steinies" which they still bottle for clubs, restaurants and hotels, their entire packaged output is now in quarts.

At a time when the public was conscious of shortages and rationing, this company felt it was good business to be able to say in its advertising: "You can have all the Schaefer beer you want—in quarts!" They played up all the good features of the quart size: (1) More beer for less money. (2) Greater space saving in the refrigerator. (3) Greater convenience in serving.

From the patriotic angle they played up the "Save-Metal-for-Uncle-Sam" angle. They pointed out in advertising, publicity releases and all promotional effort that the consumer who buys the beverage product of his choice packaged in quart size, saves five metal caps every time he buys three quarts of beer or ale—metal that can be used for ships and planes and tanks to fight the Japs and Germans. The quart bottle, requiring only one metal cap, packages the contents of two and two-thirds 12-oz. bottles.

There was another hurdle to overcome. A public accustomed to quart bottles believed there was no way "To

have your quart of beer and keep it, too." If you were a small drinker, what would you do with the leftover in a quart?

Schaefer is overcoming this obstacle with a complete campaign on "how to cork a quart and keep it." This includes newspaper advertisements, similar to the one pictured below, together with a small display stand designed for grocery store counters. As shown in the photo, this contains a "take-one" pocket for folders describing the correct way to cork a bottle of beer. Copy on the reverse side of the folder reads:

"Did you know that you can pour a glass or two of beer from a quart bottle and then enjoy the remainder later—even the next day or so?"

The gist of the directions are as follows: "First, pour slowly to retain the life and sparkle of the beer left in the bottle. Next, recork tightly with a tight-fitting cork or patented stopper (not the cap from the bottle). Then put the quart back in the refrigerator at once."

This company has had the benefit also of past consumer education programs, since they have gone through the complete cycle of beer packaging. Immediately after repeal they had only one package, the so-called long-neck 12-oz. export bottle. In September 1936, they added cans which are now no longer permitted by government order. In 1937 they adopted steinies at a time when most brewers had added the smaller bottles.

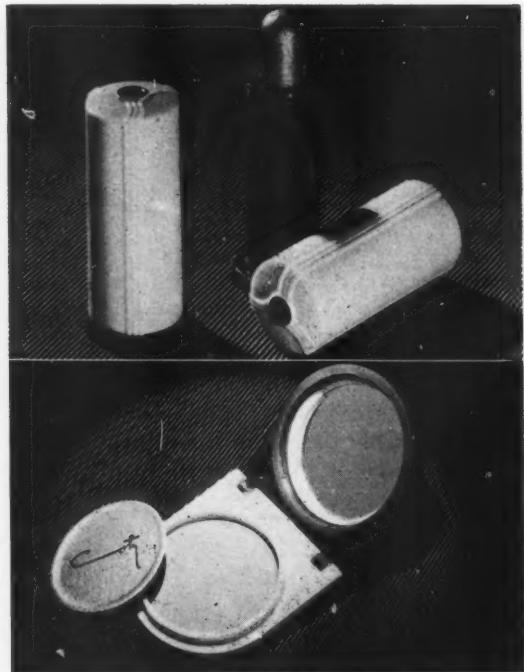
After watching the advent of the quart on the market, generally, the company finally added it in October 1940. They had been watching the growing trend to quarts and felt it would not be too hard to speed this acceptance along, when it became necessary to do so this year.

"After a rather confused transition which everyone anticipated," a company executive stated, "the quarts have been accepted by the public and our volume continues as usual—in fact, is running considerably above last year."

(Page 53)



Design Histories



Paper nail box

Every day more and more manufacturers of articles intended for civilian use are switching to packaging materials which are not on the critical list or which help conserve those essential to production for war. The Charles F. Baker Co. of Framingham, Mass., offers another example of this steadily increasing effort in the conservation of materials. They have discontinued tin boxes for their line of household nail kits and have adopted paperboard cartons.

The former tin boxes with hinged lids for assorted nails for household use have long been familiar items on the counters of hardware and 5-and-10-cent stores. Nails are relatively difficult to package because they are heavy and the points tend to penetrate the walls of a non-metal container. However, the cartons for the Baker line of nails for family use have been so constructed that there is little danger of the nail points piercing the paperboard or of the carton walls becoming flimsy or torn from repeated usage.

Besides the saving of tin afforded by these folding cartons, there is also a saving of weight in shipment, which is extremely important these days. A quantity of nails packaged in the paperboard containers will weigh considerably less than the same quantity packed in the tin.

The new cartons are remarkably like the former tin ones so far as the design is concerned. Brand and other identifications have been retained in their entirety on the paperboard boxes. The illustrations and copy are printed directly on the paperboard, duplicating that on the tin.

Credit: Cartons by Robert Gair Co., Inc.

(Page 54)

Plastics for cosmetics

These containers for cosmetics very successfully take the place of the former ones made of metal. They are molded of cellulose acetate, a plastic material which is light in weight, durable, available in a great variety of colors.

Coty finds that the new lipstick containers approach very closely in both size and weight the metal ones previously used for their Sub-Deb lipsticks. Because the wall section is comparatively thin, the lipsticks are very little larger than the metal ones and are not clumsy to hold with the fingers when applying the lip rouge. The tubular outside case of the container is mat ivory with red color accent on top. The inside tube and the screw base are a brilliant red. Molded vertical ridges on the outside case add a decorative note and at the same time afford a finger-grip for removing it from the base. The inner case has the same type of construction as that found in metal ones.

The Sub-Deb rouge container is composed of two leaves, the bottom one of which is mat ivory and the top of the same brilliant red as the lipstick case. The top portion has a mirror and the leaves are hinged together for greater convenience. When applying make-up from this rouge compact there is no separate top to struggle with and the user has the rouge and the mirror held conveniently together in the one compact. Because of the reasonable cost of the material and relatively inexpensive manufacture, the items retail at a price most people can afford.

Credit: Material by Tennessee Eastman Corp. Molded by Detroit Macoid Corp.

Design Histories



Aspirin war dress

Metal for the familiar purse-size aspirin container is fast being mustered into war service. In place of its former hingeless metal box, the Bayer Co. has adopted a new paper and cellophane packet for their units of 12 tablets. This new wartime package will be on the market probably during this month. Promoted as the victory package, it looks on the outside like a folding match packet. Inside, secured to the base fold, is a completely heat-sealed cellophane envelope to hold the tablets. A perforated line is provided at the top of the envelope by means of which to tear the packet open. However, by an ingenious arrangement of heat sealing and crimping below the perforated line, the packet remains permanently sealed except for a small opening just large enough to dispense one tablet at a time. This is done in accordance with directions and diagram printed on the inside of the outside folder as shown in the photo. Used according to direction, the tablets are well protected as long as any are left in the packet. In preliminary tests conducted among company employees, the new packet was preferred to the old one.

Counter dispensers had to be redesigned to accommodate the new packets as shown in the accompanying photo (top, right). The company is using the war-and-victory theme as the reason for the change in all its promotion of the new package.

Credits: Packets created and assembled by Ivers-Lee Co. Printing of outside folder by The Nevins-Church Press. Cellophane by E. I. du Pont de Nemours & Co., Inc.



Plywood drum

Development of this plywood "Victory Drum" for use in marketing greases will enable the Standard Oil Co. of Indiana to save for war uses 2,000 tons of steel a year required for packaging heavy lubricants, the company reports.

Though similar to steel drums in appearance the new containers are made of wooden sheets laminated together. The only metal in them is in fasteners holding ends of sheets together and in a ring for use in lifting the removable lid. The inner surface is lined with a chemical which prevents greases from creeping through pores in the wood. Standard's shipments of heavy lubricants, greases, petrolatums, etc., will be made in the new containers as fast as they can be obtained.

Since most of the greases shipped in drums are essential to keep machinery running in the war effort, development of the substitute saves steel at a critical point where it would otherwise have continued to be necessary. Statisticians have estimated that 40 tanks or 50,000 machine guns can be made with the steel which will be saved annually by the one company. The drum was developed by Standard of Indiana in accordance with the Petroleum Co-ordinator's program for conservation in use of containers. It is being made in 100-lb., 50-lb., and 25-lb. sizes.

Printed labels are affixed to the drums, giving product and other identification. The words, "Victory Drum," in large letters at the top of the labels explain the new container to the company's customers.

Credit: Plywood drums made by Seymour & Peck Co.



Soap sculptures are given realistic stage settings to make an integrated packaged product.

Cartoon cartons for soap

The House of Tre-Jur states that it is selling many times as much soap since the company has packaged its soap sculptures in a series of display cartons that have all the appeal of cartoons. To date there are 15 different designs used for the cartons, ranging all the way from circus pieces to a balcony for Romeo and Juliet.

Tre-Jur has a great variety of molds for its soap which were made before the government ruling was in effect which prohibited the making of new molds. These molds turn out dogs, pigs, seals, clowns, fire hydrants, cherubs, horses and many other figures. All of them are created with a humorous slant that is appealing to children and many of them to adults. The company first packaged the novelty line in boxes without emphasizing the display value of the container itself, but rather concentrating interest on the soap sculpture. Although the sculptures proved effective ways of increasing soap sales, the company felt that with the proper background for getting the idea of each piece of sculpture across to the prospective buyer, sales could be increased still further.

Clarice Klein who does the designing for the House of Tre-Jur began working with various ideas for inexpensive display cartons that would afford amusing backgrounds for the whole novelty line of soap. The present series of cartoon designs

which have proved so successful were gradually evolved. She dressed up the stock soap figures and gave them different characters, thus overcoming the handicap of no new molds for new figures. Two baby figures in soap were topped with black college squares or with dunce caps and placed in a play pen carton. These made a pair of soap "Quiz Kids." A stocking cap, a scarf and a pair of skis were placed on a boy figure and a Scottie dog set alongside it, the child and dog given a winter setting of paperboard. Result—a package with definite sales appeal.

Little pigs which had formerly been ranged in a row in a rectangular box were given a typical setting in a folding box that looked like a pig-pen with a tiny house in the middle. Seals sit on tumblers' boxes and balance colored balls on their noses for a bright circus scene. Cherubs' heads, complete with wings, look out from billowy clouds of colored cardboard. And of particular entertainment for the dog owner is a small Scottie with wings, entirely surrounded by fire hydrants, in a paperboard dog heaven. A display carton that is likely to arouse a nostalgic feeling in a great many people is one that represents a drive-in gas station with soap automobiles being oiled and filled up with gas.

Like a cartoon strip, all these amusing cartons and soap

figures tell a story, create an entertaining impression or suggest a joke. The display value of each group is contained all in one unit—a folding box—which makes handling simpler for wholesaler, salesman and retailer. There is nothing to get misplaced or lost. The units come all ready for the storekeeper to place on his counter or in his windows.

The House of Tre-Jur has found that it is of great importance to have a great deal of variety in containers for a novelty line such as the soap sculpture one. It is important that the folding boxes may be made to resemble houses, stores, kennels, circus rings, fantastic places or anything else that might be needed to express an idea. By using several colors in the display carton, each design is made to appear unusual and always interesting.

All the work connected with the packaging of the novelty soap line is done by the company itself. The folding boxes come from the manufacturer flat and are set up by the workers at Tre-Jur. The soap figures are molded automatically, but all the details of color and decorative treatment must be done by hand before the individual sculpture groups are attached to their particular display pieces. The bright pink snouts of the pigs are applied with a sponge. Features for other figures are painted on with a brush. Feather headdresses are pinned in place, scarfs are tied and wings are attached preparatory to placing the groups in the folding boxes.

Placing the soap sculptures on the display cartons is facili-

tated by apertures cut out in the base of the boxes. These apertures allow the worker to reach through with her fingers to pin each figure in its proper place. When pinned, the little sculptures are secure and do not become disarranged when shipped or handled under ordinary conditions. Thus the dealer is not bothered about product display units that are likely to become troublesome because they may come apart if not handled with a great deal of care. The consumer, too, appreciates the fact that the soap and tricky carton will stay together as a unit until he is ready to use the soap. Children like to play with the various pieces as toys and the soap often goes unused for a very long time. The construction of the cartons is sturdy and will hold up under the rigorous treatment children give their toys.

Some of the units have been more popular than others, of course, and Tre-Jur often finds that some items will sell out so quickly that a large supply of the display pieces must be re-ordered in a hurry. Because of the rapidity with which the cartons may be turned out, once the die has been made, as many as 150,000 of these folding boxes may be obtained upon short notice. The firm has established a policy that each display carton complete with product must sell for 59 cents. This is done because the product is sold through drug stores and similar chain stores where prices must be stabilized at a level which is within the range of the majority of the people. The folding cartons are inexpensive (*Continued on page 112*)

These folding display cartons really show off the product to advantage. Even though new molds for the soap are out for the duration, through use of a variety of these unusual folding boxes the soap sculptures are made to appear new and different.



Packaging Pageant



1

Lily Mills Co. when prohibited from using cellophane as a wrapper for spools of weaving cotton wrapped its product in transparent glassine. Almost the same appearance is retained as that of the cellophane and over the face of the wrapper and design a shiny lacquer has been placed so that the final product still has the transparency and the brilliance that made the former cellophane wrapper attractive. Wrapper by Milprint, Inc.



2

Still another product that is changing from tin to paper is E. R. Squibb & Sons' boric acid. The new paper carton seen on the druggist's shelves is immediately recognized by the consumer as the Squibb product since the carton duplicates the design of the former tin container, the color scheme and carries the same identification. Carton by E. J. Trum, Inc.



3

Puritan Chemical Co. is patenting this container for its Drier-Outer, a product which absorbs moisture and prevents clothes molding in damp closets. In the spirally wound fibre can is a perforated disc set up on a corrugated, criss-cross frame. The Drier-Outer is placed on the disc so that the air may circulate about it and any drippings of moisture will be caught in the bottom of the container.

This book-like box, bound in a material which closely resembles leather and decorated in gold, holds a Capehart control box for a radio. Wires are fastened to this box and then slipped under the rug to connect with the radio. In this way, the player may tune in the various stations designated by the buttons on the control box. The instrument itself fits beneath a panel in the book-like box. The container represents an inventive and extremely interesting use of a cleverly designed set-up box. Container made by Harlich Mfg. Co.

Home dispenser for Boston Drinking Cup Co. for 50 cups. The name Laurel has been utilized as motif for a decorative spot and the cups themselves are shown stacked in simple lines. The stylized laurel leaf is used for decorative notes on the side panels, as paragraph spacers and on the bottom panel. The package was purposely designed not to look too commercial for use in the home. Designed and made by Robert Gair Co., Inc.

Another product for which the war has increased the demand is the fire extinguisher. Here is a new fire-extinguishing powder, Whippet, product of The Halco Chemical Corp., which is packed in $2\frac{1}{2}$ -lb. and 10-lb. fibre containers with metal ends. These containers have pry-up lids and the powder is poured out into the hand for throwing on the fire. Fibre cans by The Cleveland Container Co.

A gift set of cosmetics is packed in a box, with delicately curved sides, made of natural light-colored wood for long use. Items like the metal lipstick case and the round, jewel-set rouge box also of metal almost require a gift package since the restrictions on the use of metals and their scarcity for consumer





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use will soon make metal articles rarities. Handsome box stresses their gift value. Wooden box by the Pilliod Cabinet Co.

8 For their group of Wood Nymph Pine preparations—bath oil, foam bath and cologne—Babs Creations, Inc., are using these sculptured folding boxes. The sculptured appearance is given by special construction which does not follow the usual four-sided, scored pattern. The small front and back panels extend beyond the corners which are folded to represent a number of facets, giving the whole box the appearance of having been cut from a solid block of material. Folding boxes designed by Richard E. Paige, Inc., and made by Warner Bros. Co.

9 To combine the efficient packing and handling features of a shipping box with the sales' stimulating advantages of a display carton, The J. M. Smucker Co. is packing its "Old Fashioned" unit of jams and jellies in an effective but economical corrugated box. Of one-piece die-cut construction, the box is easily set up without stapling or stitching. Double-thick partitions divide the interior into eight sections, which combined with the triple-reinforced ends give the box extreme rigidity. Corrugated box by The Hinde & Dauch Paper Co.

10 C. D. Kenny Co. has just released this new wartime package for their Norwood Coffee. The new carton, which takes the place of a former tin container, ingeniously offers dual display possibilities. One face of the carton is designed in the vertical and the other face in the horizontal. This double-faced arrangement permits highly visible displays on narrow spaced shelves, in tumble bins. Carton by Simpson & Doeller Co.

11 This tiny carrier for Charles of the Ritz Red Pencil set holds a lipstick and a jar of powder base. The little carton is of gray and bright red and the top is held together with lacings of red felt-like material. A real pencil is affixed to one side.

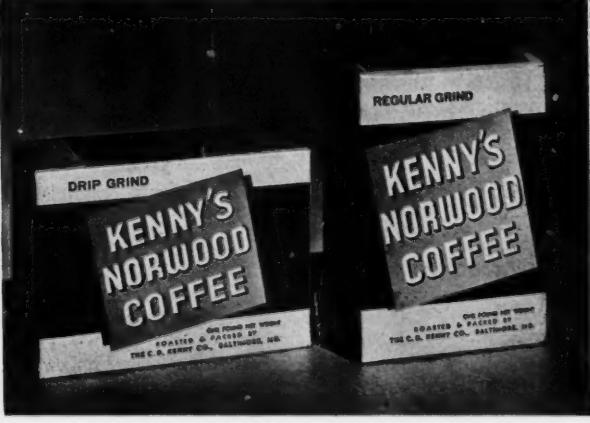
11



8



9



10



BRITISH OFFICIAL PHOTO

Lunch-hour shopping in England finds the housewife wondering how to spend her "points" on a new arrival of American canned meat.

American brands in many lands

Concentration on the present war effort is, of course, the first order of business, but forward-looking business men are not allowing it to obscure the inevitable economic "war after the war." Under the influence of totalitarianism which necessarily has been adopted by every country at war, the profit motive and energizing spirit of free enterprise have temporarily relegated themselves to the background, but it can be confidently asserted that the second order of business will be to restore a semblance of orderly economic procedure. It is not to be expected that a nation like ours will be able or willing to forget the methods and incentives which have been the mainspring of a record high level of production and distribution. Pride of personal authorship and accomplishment will continue to exert its customary force and will continue to bring renown to the names of products which have given consumer satisfaction. Goods that were deservedly popular before the war will retain their popularity if permitted to do so, but they will not survive mistreatment.

War and its destructive influences are creating a tremendous need for replacements. The pent-up demand for a free interchange of goods throughout the world will provide great opportunities for those who are prepared to make use of them. This country is now charged with the responsibility of providing foods for the armed forces and civilians of many nations. The postwar period gives every indication of becoming a marvelous opportunity for American industry to become the purveyor of food products for foreign con-

sumption. It is inevitable that our products will become better known, but will they be remembered in the form and character that means most to future business? Will the packaging that is offered during the war be the same as the packaging which we will be proud to offer, on a competitive basis, after the war? Will the money that taxpayers are spending on lend-lease be well spent in terms of future good will? Questions like these are assailing business men who are trying to think their way through a complicated maze.

Foods play an important part in winning an all-out war. Fighters are reduced to the universal and primitive urges, among which the satisfaction of hunger is ever present. Fighting on the stomach is both literally and figuratively accurate. Food quality ranks high where rank means everything. A soldier finding his favorite brand at the front feels that he is greeting a friend from home. During World War I, an American soldier in France, the former superintendent of a cannery in Salisbury, Md., made the interesting and welcome discovery that he was eating canned tomatoes from his home town. "When I ate my breakfast of these, they tasted like old home," he wrote, as he sent along a label from one of the cans. Another doughboy from the eastern shore found a case of his favorite canned pears in the midst of a bunch of British Tommies, and he sent home a picture of the group. Our military staff is planning an army of four and a half million men, most of whom may be transported and maintained in foreign lands. They will know whether our

goods shipped abroad are the equal of our goods at home.

Foods-for-victory have a double responsibility. Nutrition on the home front is no less vital than in the theatre of combat. Owing to the devastations of war, many of our allies are totally unable to produce the foods required by their people. Under the lend-lease plan we are undertaking to ship to those allies whatever foods are produced in quantity by our growers. Some of these foods will not be familiar to the people of the countries to which they are shipped, nevertheless, those people will develop a liking for the new foods and will endeavor to obtain them as soon as postwar conditions will permit.

Although people of every country accept, through habit, the kinds of foods that grow readily in their own country, nevertheless foods imported from other countries have always been prized. A delicacy is any food that grows better in the climate and soil of a foreign country. For example, sweet corn does not mature readily in the climate of Britain. Canned sweet corn is not well known there as an article of food, but it is on the way to popularity as a result of our lend-lease shipments there. Most of our foreign shipments of food are financed on-the-cuff and will never be repaid, except by the good will of the countries to which they are shipped. That fact makes it necessary for our people to compensate themselves with whatever benefit can be derived from such shipments, which should be considered in the nature of samples of our products. The samples should reflect credit on their source and should establish their product identity so that repeat orders can be taken with the expectation of continuing to supply the same identical goods.

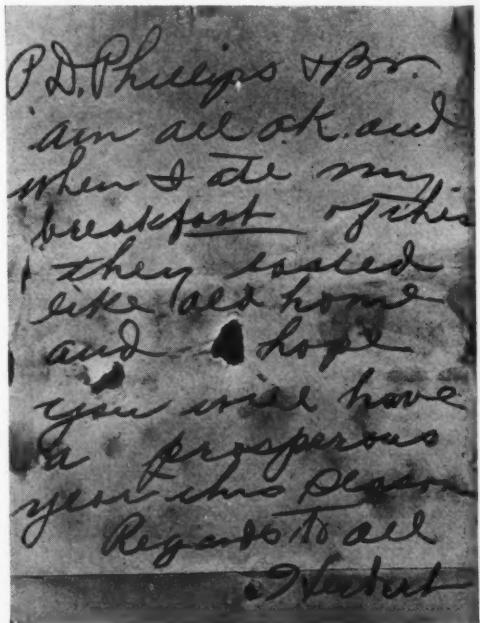
Admittedly it is important to perpetuate the value of

established trade marks and brand names, yet it is not without some difficulty that this objective can be scrupulously served. Two factors which are the necessary consequences of a war economy, namely, material shortages and price ceilings, have an insidious tendency to undermine quality standards, even to the extent of cheapening the appearance of packages which have become well and favorably known through customer acceptance. Popular misconceptions regarding the availability of substitutes have a tendency to restrict the uses of the customary colors* and designs on labels and packages. Price ceilings which are out of line with costs compel manufacturers to look for substitute materials or cheaper processes. Nothing cheapens a food package more completely than the lapse from color effect when the appeal to the eye and the appetite depend upon a true-to-nature picture of the contents. Everything that is true about symbolism in pictures is doubly true about natural pictures of food products. Human nature is much like other forms of nature—quick to detect and reject the obvious imitation.

A trade mark that is founded on a combination of colors and design would lose its value if the owner of the mark should change or eliminate the colors. The courts might even hold that the owner had abandoned the trade mark. In any event the owner would not be in position to use the courts to enjoin an imitation of the mark which he himself had imitated. There never has been any law or regulation prohibiting the use of multi-color labels on food products. The option of using less color on some labels has been misapplied in some cases by a few packers whose interest in their goods

* According to a study of 1,755 food-can labels used by 120 leading canners reported by Franzen and Meloy in January 1941 Modern Packaging, more than 94 per cent of the labels were designed in four colors, or more.

1. A doughboy during World War I found a case of his favorite canned pears in the midst of a group of Tommies and sent this picture home. 2. A soldier somewhere in France in the last war made the interesting discovery that he was eating canned tomatoes from his home town and wrote home about it. 3. Label he sent with his letter.



apparently stops at the loading platform. Such cases are, however, exceptional rather than frequent.

In some cases the conversion of plants for the production of weapons has pre-empted the facilities of factories and personnel to the extent that they are no longer able to produce their customary wares and it becomes necessary to consider plans by which an entire industry may concentrate all its production in a few plants, with the purpose of marketing simplified products under so-called Victory brands.

In England the war effort has brought about a concentration of industry by the closing of some firms making non-essential goods and the operation at full capacity of those firms left in the field. This situation has made it necessary to consider the disposition and future of trade-marked goods. The Board of Trade has stated that it wishes the closed firms to remain in existence as economic entities and to continue to have their brands produced by the operating firms. This is reported in a recent pamphlet entitled, "Effects of the War on British Marketing," issued by the U. S. Department of Commerce.

Trade marks in England

In a speech in the House of Commons, Oliver Lyttelton, President of the Board of Trade, said, "We shall give all the help we can to keeping alive these trade marks." The Defense Regulations provide that trade marks of firms closed by concentration will not expire because of non-use or failure to pay registration fees. On another occasion, speaking before the Sheffield Chamber of Commerce, Mr. Lyttelton stated that it might be a wartime advantage to have concentrated industries produce standardized products, using special, new trade marks. An argument advanced in favor of the production of standard goods is that the nucleus firm may not be able to make the differentiated products of the absorbed firms without the use of men, machinery and trade secrets from the absorbed firms. And, if the product is not made the same as before, the absorbed firm loses the differentiation that may have been the basis of its market position. All manufacturers of margarine and cooking fats did pool their products, to be sold unbranded by a joint distributing company. It is reported that several products completely controlled by the government are being sold unbranded such as gasoline, oil, milk and imported foods, such as raisins. Individual companies have combined their programs to produce standard packages of tooth paste, soap and butter, bearing the names of several brands and manufacturers.

It should be noted that *The Economist* and *The Statist* are critical of the Board of Trade's attitude that advertising, trade marks and sales forces of the closed firms should continue; they contend that England is not ready for concentration of retailing.

Idle or half-idle plants create a difficult problem for food manufacturers whose brand names have acquired a definite meaning as the hallmarks of an invariable quality. Faced with the prospect of a so-called Victory brand, such a manufacturer would be reluctant to jeopardize the good will which he has established by faithful checking of the quality on which the brand reputation is founded. Victory brands may have a legitimate place on the market as composite models of mechanical devices, in which design patents may be pooled for the duration, but where quality depends upon factors which are not readily discernible to the average purchaser, the fate of the product must depend upon the reputation that has been established, and protected under a brand.

The good will of a well-known brand has a tenacious value—it has an established identity—a fixation which comes from association of ideas. This is well illustrated by the fact that the Chinese, being a nation of symbol readers, are keen to notice even the slightest change in a "chop mark," their counterpart for the trade mark which identifies the source of goods. The Chinese readily detect a false mark of identification. Anyone who has shipped goods to Chinese markets knows that the slightest change in the appearance of the package will arouse the suspicion that the product is not genuine. This trait of the Chinese is practiced unconsciously by other races, but perhaps not so astutely. The point of this is that any tampering with established marks is likely to kill the demand for the product. If customers think that the packaged product may be an imitation or a cheapened substitute, they will pass it by and the good will of consumer acceptance will be irretrievably lost.

The British have always been conscious of the high value of trade marks. They are steadfastly holding to the customary dress for their product labels. They are even advising our lend-lease purchasing agents to suggest regular commercial labels on canned foods to be shipped to Britain. They know only too well the depressing implications of non-descript labeling.

The home front is no less important than foreign distribution, when the combined effects of price ceilings and shortages are considered. The nearby experience of Canada is perhaps typical of conditions prevailing here at home. As reported in a recent feature article by Russ Symontowne, there is an increased amount of grumbling on the part of the buying public in Canada. The government, not being alarmed but obviously anxious, invited Mrs. Elizabeth Brown of Toronto to visit Ottawa at government expense to question price-control officials on behalf of the Housewives Consumer Assn., a militant organization of 1,000 Toronto women, of which Mrs. Brown has been president for the last five years. The matter of new and confusing labels on cans and packaged foods was a big problem for Mrs. Brown. She found that "label perplexity" is causing consumers a great deal of worry. Mrs. Brown said, "Women, who do 80 per cent of the buying here and in the United States, are accustomed to looking for certain familiar brand labels and using them as guideposts in their buying. A woman learns to trust certain labels. She knows what to expect to find in the can of a certain brand. Now," she said, "our members report that these old-time labels are vanishing and strangers are taking their places."

Trade marks in Canada

Again from Canada, we have it on the authority of the *Rayon Reporter*, published in the interests of users of rayon by Courtaulds (Canada), Ltd., "It does not seem out of place to point out, as has been done before by many, that in these times of conservation of civilian goods and government sponsored education of the consumer to spend more wisely and obtain the greatest possible use of their purchases, informative labeling has an even more important duty to perform. In this respect manufacturers have an important responsibility. This responsibility is to label clearly and honestly the products they produce. Such labeling must be really informative and not just a merchandising frill that passes on no useful information."

In a recent issue of *Domestic Commerce*, the weekly publication of the U. S. Department of Commerce, Nathan D. Golden, one of the department's (*Continued on page 106*)

Q. When is a compact a promise?



A.

When you come through with a substitute package that requires no critical materials nor any vital manufacturing facilities.

This answer to a pressing packaging problem came from the development laboratories of the F. N. Burt Company. Because there was a large demand for compacts—while both the metals and the machines to make them were serving the needs of our Army and Navy—Burt engineers put their brains and experience to work on the problem of finding a substitute.

They came up with the compact which is pressed and die-cut from heavy-weight paperboard—uses no critical materials, yet is sturdy and accurate enough to close with the snap of a machined metal job. Appearance is excellent—achieved through color printing and lacquering or coating to rival the attractiveness of metal compacts.

This is one of Burt's answers to the problem of "Keep 'em Rolling" in the packaging industries. It is a product of a package-creating and package-making service that is infinitely resourceful in solving all problems under all conditions. Other examples of Burt resourcefulness will appear in subsequent issues of Modern Packaging.



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DANVILLE, CALIFORNIA (Near San Francisco)
A. G. Spilker, P. O. Box 126, Telephone: Danville 27
LOS ANGELES 1709 West 8th St.—Telephone: EXposition 0178
CANADIAN DIVISION: Dominion Paper Box Company, Ltd.
469-483 King Street, West, Toronto 2, Canada



Tray type packing has reduced time for testing tubes by 30 per cent.

Super-packs for radio tubes

As in virtually all American factories, RCA executives in the largest radio tube manufacturing plant in the world faced a problem of tremendous import when war vastly increased the demand for radio tubes. While laying out overall programs to utilize factory facilities to the utmost, these men made a place in their plans for one of the greatest single factors in the radio tube industry—the method of packing.

Before many months had passed, they found that better means of packing radio tubes had substantially reduced the need for warehouse and shipping space, had sped up certain testing procedures to the point where many additional thousands of hours could be devoted to the manufacture of tubes and had made other important contributions to the successful production and distribution of the tubes.

The inevitable analogy of Topsy must be applied to the old packaging methods used in the radio tube industry. They just grew. Radio tubes were developed by the manufacturers of light bulbs and, while the means of making them were recognized as being radically different, little attention was given in the early pioneering days of radio to efficient ways of packing them for warehousing and shipping to customers.

The global war which is changing the face of the earth provided the needed spur towards more efficient methods of packaging. When America began to prepare for war, she turned to radio to provide the eyes and ears for her armed forces. As a matter of fact, she has become so dependent on the ether waves that in some circles the conflict is most

frequently referred to as a war of communications. And since modern communication is spelled r-a-d-i-o, and the heart of the radio is the tube, fabulous orders were soon crowding one after the other on the books of all the different tube manufacturers.

RCA's vast New Jersey factory, ample for peacetime requirements, soon became too small. Something had to be done to expand the manufacturing facilities of the factory without taking the time to erect new buildings, for which there was no room in the immediate vicinity. Executives of the company found that one solution would be to reduce the amount of space and time required for testing, warehousing and shipping.

At this point a young man, Charles I. Elliott, came to RCA for a job. Elliott, at 26, had 12 years of experience in the packing field, having worked for a number of the outstanding paper and box makers, when he knocked on RCA's door in August 1941. He had ideas, he said, that would benefit RCA. He was right as rain. Beginning as an office boy, Elliott has learned packaging principles and practice from the sub-basement level up with such firms as Empire Central Carton Co., Container Corp. of America, Hankins Container Co. and Kraft Corrugated Containers, Inc.

And so RCA hired Elliott—and then did something rare indeed in modern industry. They stated their problem, gave him a desk, a chair and a free hand. In one year the company found it had a revolutionary new principle of packaging

radio tubes which, now being utilized by many other units of the tube industry, is resulting in major contributions to the war effort in substantial savings in shipping space, material, handling and warehousing.

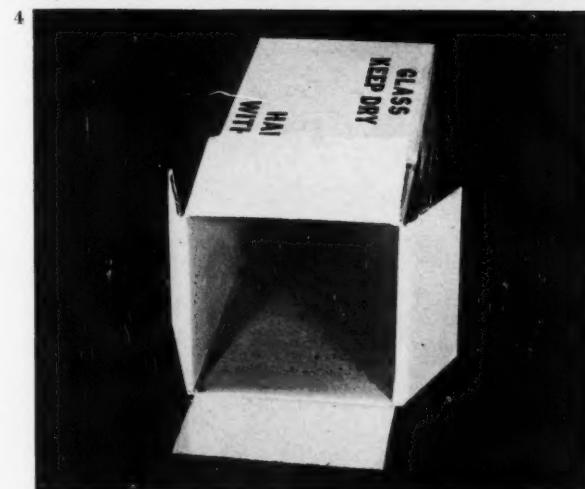
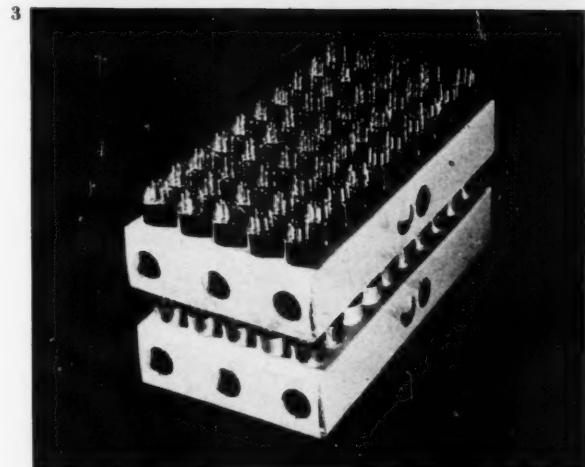
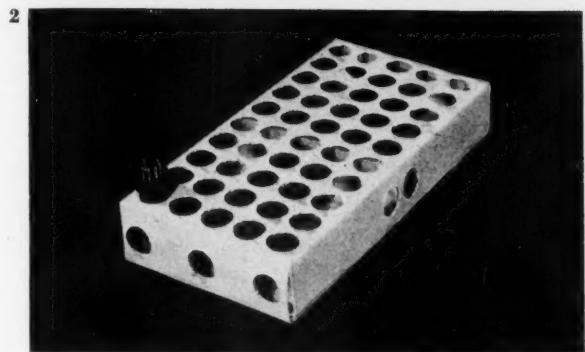
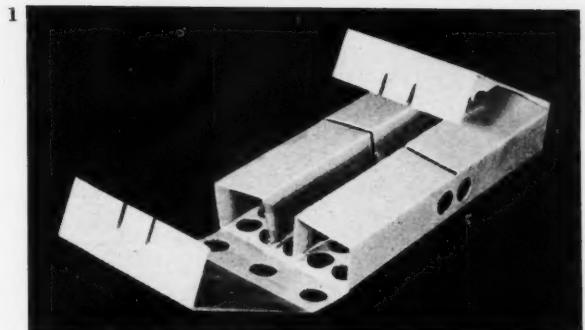
However, Elliott had barely begun to work on RCA's problem when it was thought by many that there might be a shortage of paper and paper products in the latter part of 1941. The need for efficient packaging looked greater than ever. By the time the shortage scare had blown over, all America was being begged by Washington to make every effort to conserve shipping space as a means of helping the railroads avoid a traffic jam. But by this time, RCA tubes were beginning to flow from the factory in the new packing cases and so what might have been still another tremendous need for modernization became instead a cause for rejoicing that foresight had prevailed. The new packaging method, which centers on ingenuity in standardizing the size and shape of all kinds of boxes for all kinds of tubes, has enabled RCA alone to save 120 tons of packing material a year. Further, approximately twice as many tubes can be packed into a box car or truck, thus halving the need for critical shipping space.

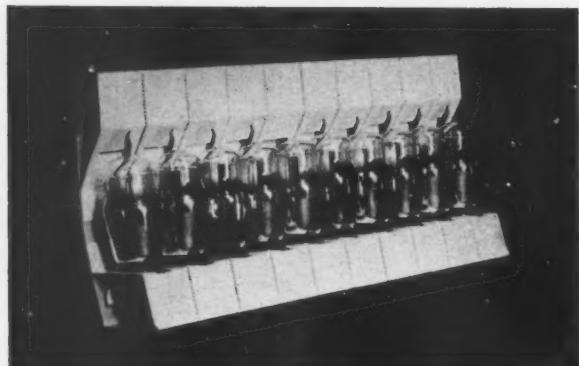
To extend the value of the new packing principles more quickly, RCA has granted rights to the new type cartons to other tube manufacturers. In addition, its competitors have been invited into the factory to study routines developed to make the most efficient use of the new process. The American Standards Assn. is studying the possibilities of setting up an American War Standard covering the packaging of electronic tubes as a result. Far-reaching effects are expected of the new development in many fields. Elliott, a methodical inventor who keeps accurate records of daily progress, found that packing methods in use when he attacked the problem required the use of 210 separate pieces of packing material per 1,000 tubes. A packing box of 22 parts, some of them no longer obtainable, was used to store and ship certain types of glass tubes.

When he had finished re-designing packing cases, Elliott found that he had reduced the 210 pieces of packing 1,000 tubes to 24 pieces. Further, it was discovered that a single one-piece, tray-like container, planned to hold the tubes safe within shipping cases, could also be used to save time in the manufacturing processes. Of inestimable aid to development of the new packaging principle was the cooperation of several box and paper suppliers. On numerous occasions, Elliott's plans and drawings were turned into sample packing boxes in a matter of hours. Invariably the plans proved out in practice and much time was saved in placing the new ideas to work.

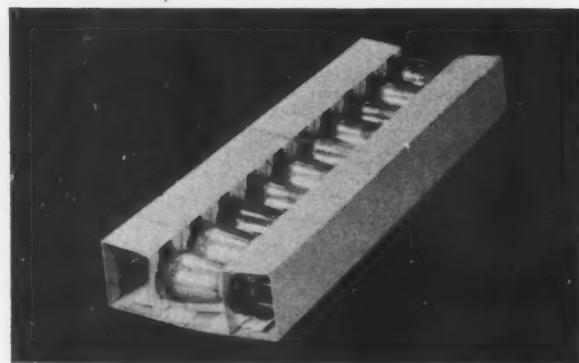
RCA's findings in packaging methods are a major war contribution in the form of standardization as well. Every tank, plane, ship and many trucks are radio equipped. Designed to operate anywhere in the world and far from bases, these units must carry spare parts with them. Extra radio tubes, packed so that they will be protected against the violence of battle, find their way into millions of fighting machines. Standardization of tube packing makes it possible

1. Tray which is partially assembled. Sides and flaps are folded at scores, then end flaps folded over side flaps.
2. Tray ready for loading.
3. These trays are ready for packaging. No liners or pads are required with this method.
4. Container for 100 tubes. Containers are identified by the letter symbol B followed by a number to specify box size and tube class. Note also handling directions.

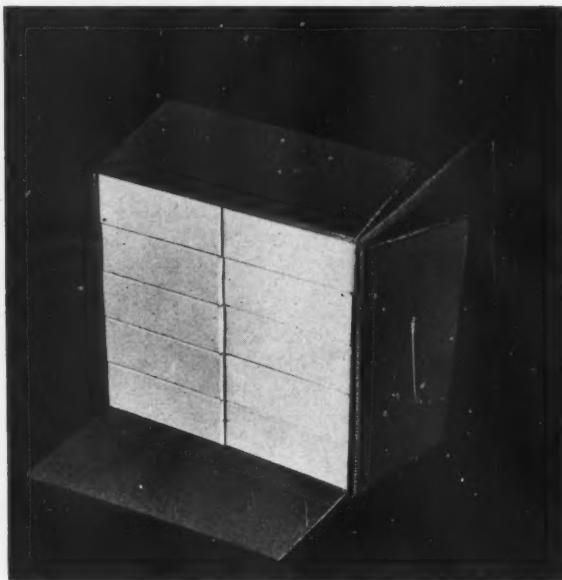




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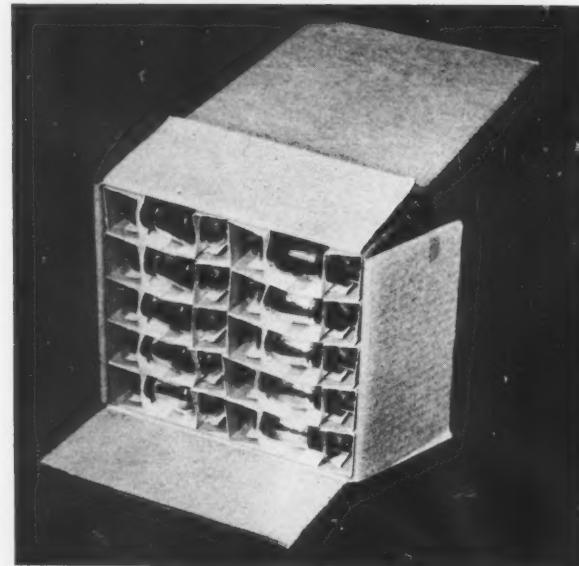


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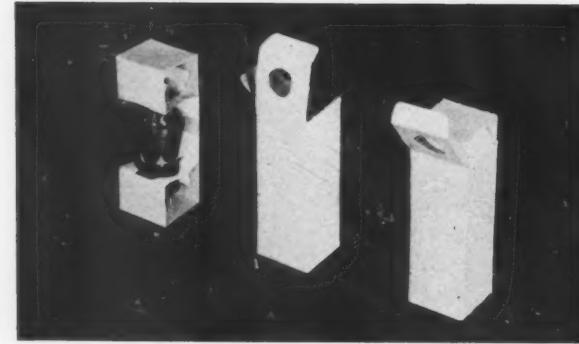


9

5. Clip gang loaded and partially assembled. 6. Clip gang loaded and fully assembled. Each clip gang consists of 10 clips and is perforated so that clips can be separated for individual packing. 7. Container with clip gangs inserted. For bulk packaging 10 clip gangs (100) tubes are slid lengthwise into the open end of the corrugated container. 8. Clip and individual carton. 9. Individual cartons packed in 100-tube container.



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for the first time for designers of planes, tanks, ships and trucks to provide space accurately for the spare tubes, with the knowledge that the box holding them will fit the niche, no matter which manufacturer built the tubes. This is a vital consideration with U. S. fighting equipment in action in many parts of the world.

The new packaging method has been found to make possible unexpected savings in many directions. The need for packing material has been reduced by 30 per cent while at the same time factory handling efficiency has been stepped up 20 per cent. Loss by breakage has been materially reduced.

This latter consideration is of unusual importance. Most radio tubes require protection when out of their sockets. Some of the larger types present the possibility of implosion. All of them require strategic war materials in their manufacture. Thus, each tube must be made to reach its destination intact.

In demonstrations which Elliott has given before high government officials, the Army and Navy, other manufacturers and the press, the protection offered by the new cases has been demonstrated dramatically. By the simple expedient of rattling an old box and a new box full of tubes, he shows which gives real protection against breakage in transit.

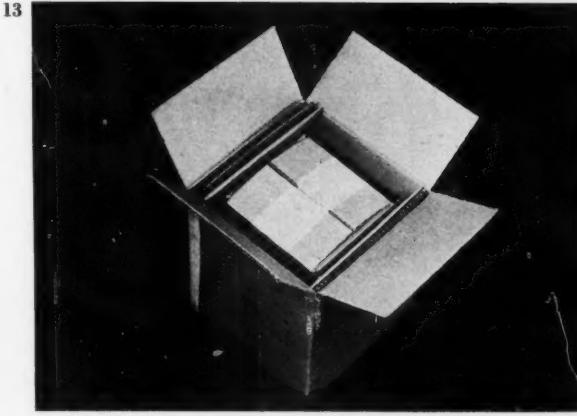
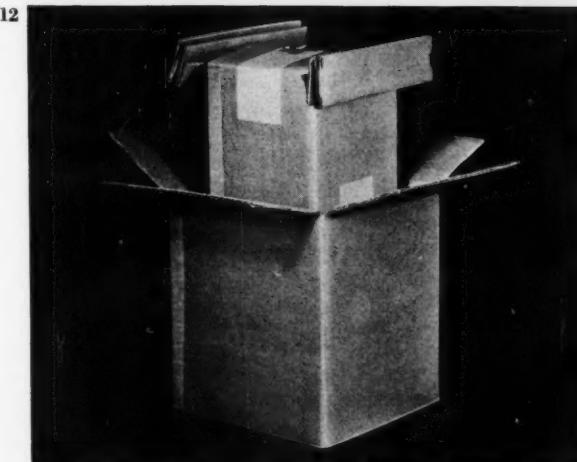
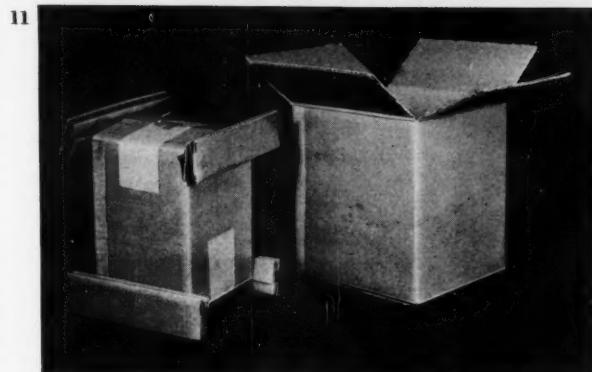
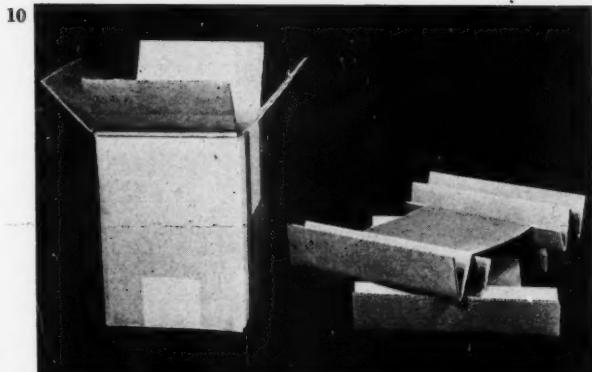
It is interesting to note that the search for greater protection for tubes during shipment led to the discovery of a system greatly simplifying several problems at once. Glass receiving tubes are fragile and small. For many years they had been handled in bulk in the factory and packed in individual cartons for shipment. This latter operation was laborious and expensive. In searching for a better way of handling glass tubes in the factory and warehouse, RCA

developed a cardboard "clip" which holds 10 tubes of the same type in a horizontal line by gripping the base and the top portion of the glass envelope. It was found that by perforating the "clip" vertically between each tube, it could be torn into 10 sections, each holding a tube. Then the "clip" became the interior support for the tube in its individual carton in which it is shipped and sold.

This is how it works: The "clips" of 10 tubes are retained intact throughout the manufacturing and testing processes and are packed in cases holding 10 "clips" in the warehouse. When they are sold, the tubes are branded, the "clips" are torn apart and the small sections slid into the individual cartons. Then the individually packed tubes are returned to the large packing case that held them in the "clips." This saves one packing case and much time. The problem of packing cases has always been acute. Radio tubes come in all sizes from tiny "acorn" tubes no longer than a dial knob to large broadcast transmitter tubes bigger than a good-sized radio. It has been the practice of tube builders to have a different-size packing box, with its sectional dividers, corrugated separators and other parts for each size tube. But no more. RCA thought about that, too. The solution is so simple that it could be adapted into an excellent kindergarten toy. Five boxes were designed, ranging in size from 7 by 7 by 9 in. to 20 $\frac{1}{2}$ by 20 $\frac{1}{2}$ by 22 $\frac{1}{2}$ in., and made of heavy cardboard. If a small power tube is to be shipped, it is placed within the smallest box which is then placed within the next size box. Die-cut creased sheets provide the interior support between the boxes. The five boxes are so designed that, when one of the larger tube types is placed in one box, the next larger box becomes the shipping container. In demonstrating this development, Elliott always amuses his audience by having the boxes packed together and then unpacking them from the largest to the smallest during his lecture.

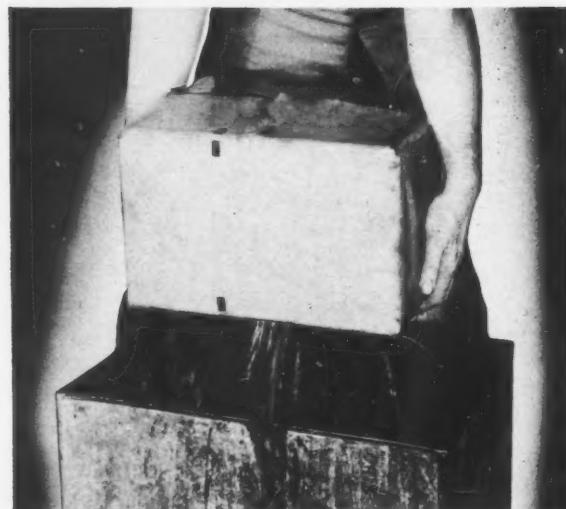
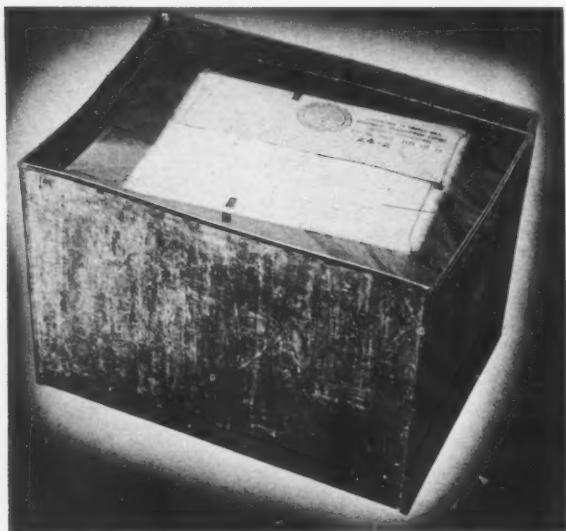
Tremendous advantages have been found for the new system in the handling of every type of tube. A more compact cardboard box has replaced a heavy and much more expensive wooden container for factory transportation of power tubes and with much greater protection from breakage. One universal box has been designed for packing all types of power tubes of the same size, supplanting a large number of various-sized special boxes. Ingeniously designed inner supports do away with the layers of wadding once used, while the application of simple laws of physics provide greater safety for the tubes when the box is subjected to unusual stress.

The bane of the builders of large tubes has long been the wadding formerly used to hold them within packing cases. To have a \$600 tube, carefully constructed to precise standards by hand, smashed because the paper wadding had settled during shipment was not only annoying in peace-time—it was expensive, too. And in wartime it became extremely serious. For many years RCA has employed one man to do nothing else but handle the shredded paper wadding in the warehouse. Tons of it were used every week, exposing the plant to fire hazard. But the new cardboard interior supports, designed by Elliott to replace (*Continued on page 104*)



10. Shipping method is a series of cartons suspended one within another by means of scored sheets seen on the right, in the photograph. **11.** Sheets are locked under flaps of carton to be suspended. **12.** Suspended packed carton inserted into shipping container. **13.** Entire assembly is pushed completely into container, ready to seal for shipment.

Watertight sealing glue



1 Today when more and more shipping cases of solid fibre and corrugated are being used in the transportation of all kinds of products intended not only for the armed forces but also for civilians in all parts of the world, it is important that the sealing of these cases be as strong as possible. Cases filled with foodstuffs and other goods for our military forces and for lend-lease purposes are exposed to every kind of climate and to temperatures ranging from icy cold to the heat of the desert. Often the cases have to remain on docks during many rainy days. There is no time to handle shipping cases with care. They have to be strong enough to withstand whatever rough handling they are given until the contents arrive at their destination.

But no matter how strong the shipping carton may be, if the sealing is weak, the capacity of the carton to protect the contents is nullified. A shipping case is just about as strong as the sealing which holds the top and bottom flaps in place. Of the different agents which tend to weaken a solid fibre or corrugated container, one of the greatest is water. Long exposure to water is particularly hard on the sealing, and after immersion in water for any length of time many sealing agents have the tendency to dissolve and thus fail to provide the proper adhesion. Because of this fact, the government has set up specifications for weatherproof export containers which incorporate definite stipulations regarding the water-resistance of the seal.

A sealing glue which has been recently developed is designed to fulfill the exacting needs of proper seal for lend-lease and export cases. It is not only moisture-resistant, but it will also withstand actual immersion in water. The manufacturers before placing the glue on the market submitted it to the following rigorous test by an independent laboratory in order to be sure that their product would hold up under the conditions specified by the government for weatherproof solid fibre cases.

(Continued on page 112)

1. At the beginning of the test, solid fibre weatherproof case, contents of which weighed 35 lbs., sealed with the glue immersed in water held at 70 deg. F.
2. Inspections were made at regular intervals to determine adhesion of glue at flaps.
3. After 54 hours' immersion, boxboard plies started to separate but flaps adhered.
4. At end of 54 hours, box flaps were opened by force, but sealing glue showed no signs of dissolving.

4

(Page 68)





YOU'LL LOVE IT IT LOOKS LIKE ALUMINUM FOIL

Examine carefully the perfect metallic finish of our material. It can replace your aluminum foil or composition foil or tin foil wrapper and carton no longer available.

- It is non toxic
- It can be made waterproof
- It can be made heat sealing
- It can be made grease resisting
- It is available in various weights, finishes and colors

You doubt it? . . . well, write to us for samples and information. We will be glad to tell you all about it and solve your packaging problems.

KELLER-DORIAN CORPORATION 516 W. 34th St., N.Y.C.



HOLDER OF THE COVETED TREASURY FLAG

DISTRIBUTORS

CHICAGO PAPER COMPANY

801 South Wells Street, Chicago, Ill.

DWIGHT BROTHERS PAPER COMPANY

626 South Clark Street, Chicago, Ill.

325 North Milwaukee Street, Milwaukee, Wis.

THE JOHN LESLIE PAPER COMPANY

301 South Fifth Street, Minneapolis, Minn.
Park Square, St. Paul, Minn.

MATTHIAS PAPER CORPORATION

165 West Berks Street, Philadelphia, Pa.

MILLCRAFT PAPER COMPANY

1927 East 19th Street, Cleveland, Ohio
1933 Spielbusch Avenue, Toledo, Ohio
237 East Mill Street, Akron, Ohio

NORTHWEST PAPER SALES COMPANY

1205 Western Avenue, Seattle, Wash.
139 S. E. Taylor Street, Portland, Ore.

PAPER SALES LIMITED

11 King Street West, Toronto, Canada
1559 Sun Life Building, Montreal, Canada

POLLOCK PAPER & BOX COMPANY

Dallas, Texas

PRATT PAPER COMPANY

176 Federal Street, Boston, Mass.

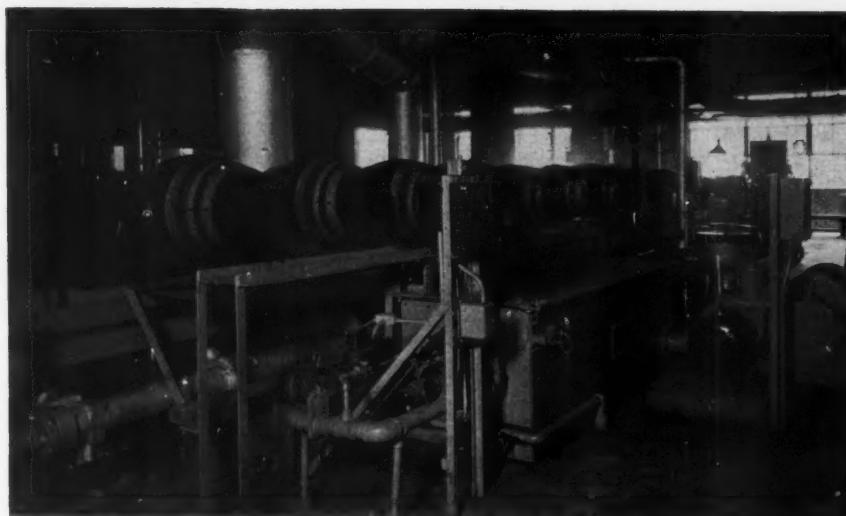
A. E. SKERRITT

1356 - 22nd Avenue, San Francisco, Calif.

A. W. ZUKOSKI

455 Paul Brown Building, St. Louis, Mo.

KELLER-DORIAN CORPORATION 516 W. 34th St., N.Y.C.



Line of barrels being de-pitched preparatory to receiving complete new coating of pitch.

Repitched barrels for beer

Now that packaging restrictions and the lack of metal cans and shortages of bottle closures have necessitated a change to draught beer distribution for many American breweries, a new type of packaging line has been developed—a line charged with the responsibility of carrying a much heavier load of the brewery's output and efficiently renewing and maintaining the serviceability of kegs, barrels and larger containers.

Anheuser-Busch, Inc., St. Louis, is one of the large breweries whose products, Budweiser Beer and Michelob Beer, have national distribution. Thus the company has been faced with a series of problems which do not concern smaller brewing organizations which have only local outlets. Since early in 1941, Anheuser-Busch has been experimenting with the switching of its output into bulk containers instead of glass or tin and was ready to drop the tin can immediately after the government's first warning about the use of tin for beer. The bottle and can packaging lines, which have won national recognition for 100 per cent automatic efficiency, can be shut down for long periods or even stopped altogether without disaster to Anheuser-Busch production, so efficiently has the company arranged for larger container distribution.

Many obstacles had to be overcome in making the switch to these larger containers, such as necessary refrigeration, re-use of containers, collection and return of delivered containers, etc. Bottled or canned beer, for example, is pasteurized after the container is filled, which permits shipment at ordinary temperatures without danger to the flavor and without refrigeration. Draught beer, however, must be kept below a temperature of 40 deg. F. from the time it leaves the brewery until it reaches the eventual consumer and the beer must be properly refrigerated in storage. It is absolutely essential also that the container be sterile and free from the slightest trace of old or sour beer from former use.

Although metal containers are used to some extent, the

bulk of the draught beer output is handled in wooden barrels which are coated or "pitched" on the inside to prevent leakage and contamination of the beer. The metal containers formerly used by Anheuser-Busch will be continued in use, but all replacement or new packages will be wooden barrels. Along with the use of wooden barrels, the company has adopted the standard practice of repitching carefully every container no matter what its condition is when it is returned to the St. Louis plant.

The usual practice in smaller breweries is to examine each container before refilling and to repitch only those in which the coating appears defective or cracked—some three in five ordinarily requiring such service. When the containers are away from the brewery as long as a month or more and are returned in box cars without refrigeration, the opportunity for injury to the pitch lining are multiplied. Under such conditions, vastly enlarged by the switch to draught beer in all cities, Anheuser-Busch feels that the only sound way to insure perfect conditions for its high grade Michelob and Budweiser beers is to recondition and repitch the interior of each container each time it comes back into the brew house to be refilled for future sale.

For this purpose, the brewery has installed three special washing and pitching machines which perform all of the required operation with a minimum amount—less than 20 per cent—of hand labor. Containers are brought from a series of storage rooms which open on one side to trackage docks and into the repitching plant on the other by a chain conveyor which moves continuously from the line to a conveyor loading platform. Containers are routed to the pitching lines as received, each dated with a chalk pencil which washes off automatically when reaching the line. In this way, all containers will receive the same number of treatments over a given period of time.

The first operation on the line, which (*Continued on page 106*)

SOAP SALES JUMP 1000%



IN BROOKS & PORTER "SHO-PAX"

Tre-Jur molded novelty soaps are irresistible to consumers when packaged in brightly colored dramatic Shopax* settings.

Sales have jumped literally one thousand percent since the adoption of the Brooks and Porter packages. The soap molds are stock designs dressed up and dramatized by their Shopax* settings.

Each Shopax* — like every Brooks and Porter package — is an exactly engineered cardboard container — accurately die-cut and beautifully printed to achieve maximum display and long life.

The success of Tre-Jur packages is proof positive of the effectiveness of Brooks & Porter's packaging service.

It is a service that can help you . . . whatever your packaging or display problem.

*COPYRIGHT

BROOKS AND PORTER, INC.
304 HUDSON ST. NEW YORK CITY

Showmanship in Cardboard



ENGINEERED



CLEVER



HUMOROUS

MODERN DISPLAY

War's effect on display

by Frederick L. Wertz*

That the war up to the present has had some very definite effects on display is readily apparent. That it will have still greater effects in the near future is, of course, a matter of opinion.

The chief ill effect of the war on display was brought about last year by the emphasis on the shortage of paper and cardboard. This was not so much the result of mis-information from Washington bureaus as it was the fault of sincere, patriotic advertisers, encouraged by propaganda distributed by various trade associations and trade publications, who felt it their duty to conserve paper and board and to do everything they could to further the government program.

Speaking to the Assn. of National Advertisers at their convention in Hot Springs last November, Leon Henderson stated explicitly that he did not think any advertiser would have any trouble getting all the paper and board he needed for his displays for his products.

Despite this, however, the paper shortage propaganda did seriously affect the purchase of displays in the early stages of the war, with a very unfair result upon the whole display industry. It is well known, of course, that for several months past and at the present, there is no shortage of paper and

paperboard. In fact, the market is glutted and prices, in many cases, have gone down considerably. Fortunately the larger users of displays throughout the country did not cut their display programs. Many of them have even increased their appropriations.

Let us take the drug field as an example. Ten years ago it was the largest user of display material. This use slumped materially, due mainly to the effects of the Robinson Patman and Fair Trade laws. There are indications today that the drug field is coming back into display quite heavily. Several far-seeing drug manufacturers are planning display programs today using display as an advertising medium, as it is being used in other fields and distinguished from its former use almost exclusively as a sales help. The Lederle window, pictured in this article, is an example of this general type of display being used more and more by the leading drug houses in the country.

Part of this revived interest in display is due to the realization of the effect of the gasoline and rubber shortage upon retail merchandising. With every mile of travel carefully considered by the consumer, it is evident that the neighborhood store is going to gain an advantage over the central business district location. It is also evident that with the wholesale

* President, Window Advertising, Inc.

1. *It may come to this—traveling for civilians will be strictly on foot. This display man carries all his own material—enough for 8 or 10 displays—in the container he has in his right hand. 2. Material for this entire Camel window display was only one of the sets that the installer carried in the container.*

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decrease in consumer goods production together with rationing programs, many of the weaker retail establishments are going to be forced out of business. The stronger and better neighborhood stores will therefore become increasingly important in the distribution scheme. As tires become more worn and gasoline rationing expands further, these tendencies will make themselves more and more apparent. Of course, there are many lines of business that have previously used display, like automobiles, tires, refrigerators, radios, etc., that now have nothing to sell to the consumer and these will probably make little use of display for the duration. Some, however, will continue to keep their trade marks and brand names alive through the use of institutional types of displays.

During the last few years, however, the oil companies have become extremely conscious of display and even now most of them are doing more on display than they have ever done before. Part of this interest in gas station displays is a result of the urgent necessity for the companies to give more help to their local gas station operators and assist them in developing the sale of other products besides gas, oil and tires so that they may stay in business until the dawn of better days and they can again promote their regular products.

In my opinion the use of display by advertisers other than those whose consumer production has been completely stopped, is very definitely on the increase today. Display presents to the advertiser the only medium with the possible exception of posters by which his advertising message can be presented to the consumer free from the distractions of war news, fireside chats, propaganda and politics.

There is another serious aspect of the war's influence on display that will make itself more and more apparent as the months go by. It is true that there is plenty of paper and cardboard, but we are daily getting into another bottleneck and that is transportation. Cardboard displays are not light material. Few people realize that a display campaign for 25,000 full windows, including materials and necessary decorative accessories, will require not less than 12 full-size freight cars for transport.

There are 10 national advertisers today who are using a

3. Forty of these Pepsi-Cola displays, including the crepe paper, cardboard caps for the columns, tacks and instruction sheets are packed in containers with a total shipping weight of 100 lbs.

combined total of not less than 2,000,000 displays per year and this means that at least 1,000 freight cars are in use at least a week each to move this material, which has to be brought in to the producer and then sent out to the field. It is thus apparent that in the event of serious priorities in freight transportation, display may find itself in a difficult position and likely to suffer curtailment.

Unfortunately, however, freight is not the only transportation difficulty to be faced. Displays find their way to final destination by three methods: 1. Professional installation, either through organized installation services, or by crews employed by the advertisers themselves. 2. Distribution by salesmen, with or without displays being installed. 3. Distribution by parcel post or express, depending upon the dealer to make his own installations.

Because tires are wearing out, together with the increased difficulty in maintaining manpower at the customary level, serious inroads have already been made on the first two methods and even more serious effects are probably due about the beginning of next year. Many professional installation companies throughout the country today cannot handle very much more business than they now have because they cannot get men and, when the men they do have cannot get tires or gasoline, the situation will become still more acute.

Considerable research and experimentation is now under way to find ways of decreasing the size and weight of display material, to the end that there will be less freight for the railroad to haul and less weight for the window trimmer to carry, so that he can continue to make installations even if he has to give up the use of his car. This may necessitate radical changes in the method of producing display material, particularly in the methods of mounting and finishing.

An example of one possibility is the illustration of the Pepsi-Cola display accompanying this article. This display has a center piece 35 in. high by 50 in. wide and two columns. Forty of these displays, including crepe paper, cardboard caps for the columns, tacks and instruction sheets, were packed in containers with a total shipping weight of 100 lbs. or $2\frac{1}{2}$ lbs. per complete display. If similar results could be

obtained for all displays, we could decrease freight requirements by about 75 per cent and furnish material so that the installer could take eight or ten displays under his arm and carry his day's work with him, without having to use a car.

Maybe we will have more gasoline and more tires. Maybe not. It would at any rate seem a short-sighted policy not to take all of the insurance possible against things that may and probably will happen. These suggestions may seem very revolutionary and many will say they cannot be done. It is well to remember, however, that our enemies have been quite successful in this war in doing some of the things that could not be done.

This brings up the thought of some of the things that are being done in display by the governments of other countries. From the foreign magazines which come to my desk it has been apparent that Germany has been using display for war propaganda, both within and without its own borders, to a far greater extent than any other country. It is now estimated that England also is using approximately one-half of its available display industry for war propaganda purposes. In this connection, it will be of interest to quote the following extract from an article appearing in the July issue of *Display*, a magazine published in London:

"Such is the unimaginative attitude of the British Administration. We have come across it on not a few occasions, and always the excuse is given that 'the Treasury won't sanction the expense!' One gathers that the Treasury is running the propaganda of the country. What qualifications it may have to make decisions on this very specialised and expert work we do not know but it would seem that the merits of the British propaganda are finally judged on what it is going to cost. That, of course, is why the Germans are making a much better job of it than we are."

"A prize example that has come to our knowledge is the case of Lisbon. As everyone knows, this is the meeting place of Europe and consequently of great strategic importance from a propaganda point of view. The Nazis realized this and a long time ago sent into Lisbon a complete display organisation. All the shopkeepers of Lisbon were approached and asked to give space to Nazi Germany display schemes and were offered payment for such space.

"Many of the shopkeepers are pro-British but the high rate of payment was too tempting to be refused. In consequence, Lisbon shopping thoroughfares have become one big permanent Nazi exhibition in what is now the show place of Europe. British authorities in Lisbon became most concerned and an urgent request was sent over to London, asking that something should be done about it. The extent of our effort to counterblast the Nazi propaganda (so it is rumoured) was to send a small quantity of literature on display to representatives in Lisbon so that they could read up the subject like a correspondence course and get on with the job. Meanwhile, the Nazis pursue their object with studios, artists, copywriters and display canvassers."

Our own government has made very little use of display up to the present time. This is largely the fault of the display industry itself, as there is no organization to supply the government with the necessary information as to how it can use display. All other advertising media spend hundreds of thousands of dollars in promotion, while display does practically nothing. There is an apparently insurmountable reason why this is true. For example, all other media sell space and a slight percentage added to the price of this space provides large promotional funds. Window display space is, with minor exceptions, free and in any case it is not controlled by the so-called window display industry.

For forty years the writer has been trying to figure out some way that the advertiser could be made to pay for the salesmen sent to sell him window display and we have a nice job waiting for the man or woman who can tell us how to do it.

The various departments of our government are becoming intensely interested in window display and they are making plans that, if put into effect, will result in a very great use of this important medium.

The Advertising Council has recently set up a committee, headed by one of its directors, Mr. A. O. Buckingham of Cluett, Peabody & Co. The War Information Office is, I am informed, setting up a division of propaganda and including a department of display. The Victory Display Committee of the I. A. D. has embarked on a very ambitious program for display, with the backing of the Treasury Department. Indications are that in the near future display may step into a very important place in the war effort. The use of display in the last war gave the industry the greatest single impetus it ever received.

It is my considered opinion that the use of display in the present war will develop a still greater appreciation of the value of advertising space in the windows of retail stores. The question I have been asked by every official I have talked to in Washington is, "How can we use window display?" I think the answer is going to be found very soon.

The question I am asked by many advertisers is, "Can we continue to use display in spite of gas, rubber and transportation difficulties?" I think we can, if we are willing to depart from conventions and do things that have never been done before. Display interest and display consciousness are growing today at a faster rate than I have ever seen before in my forty years' experience in the industry.

4. *Lederle Baby Week display. With every mile of travel carefully estimated displays like this in neighborhood stores will gain advantages over central business locations.*





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DISPLAY GALLERY

1 A multiple construction gives striking reality to this Breyer display. A two-plane peach in full perspective blends into a plate of delicious peach ice cream. The dish of ice cream stands on a front plane by itself, resting on a slanting die-cut doily, thus giving the impression of actuality. Display made by Einson-Freeman Co., Inc.

2 Many of the men and women who work in war plants on the night shift have found it difficult to get an adequate amount of sleep during daytime hours. Daytime noises have been a special problem. Allis-Chalmers, whose big Milwaukee plants employ thousands of war workers on night shifts, were convinced that they could obtain cooperation from the noise-makers, so this attractive poster, printed in six colors, has been supplied workers in the company's plants. Poster made by Milprint, Inc.

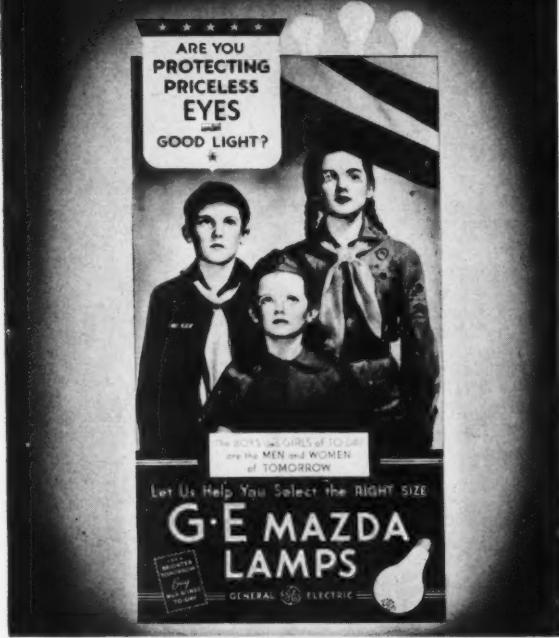
3 Protection for the production worker is emphasized in the new counter display adopted by Oneida Paper Products, Inc., for their packages of Flav-O-Fresh sandwich bags. With the tremendous number of workers in war production who must carry their lunches, a display which suggests to the home sandwich maker an easy and quick way of wrapping sandwiches attracts immediate attention. Display container designed and made by Robert Gair Co., Inc.

4 The central object of interest in an exhibit being shown by Cook Paint & Varnish Co. in a display which travels from store to store is the mummy of an Inca child. Cook Paint & Varnish Co. purchased it for exhibit to the public through the medium of the company's stores throughout the Southwest. A large card shown with the exhibit explains why the paint company is taking this unusual way of drawing attention to its products and emphasizing their preservative qualities: "Man's earliest efforts to preserve are his efforts to maintain the human body in its original condition. From that beginning, the art of preservation has extended to practically all of the things by which we are surrounded and today preservation through paint is accompanied by color and beauty as well."

5 G. E. Lamp Dept., Nela Park, Cleveland, has just inaugurated an interesting plan, prepared in cooperation with the U. S. Treasury Department, to sell War Savings Stamps to its display service subscribing agents and, at the same time, to offer a free renewal to its display service for 1942-1943. This novel

4





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"wartime service program" is designed to sell nearly half a million dollars worth of stamps. Participating G-E lamp agents will be provided with special red, white and blue 25-cent War Stamp Albums. Outstanding features of the program are five major display pieces, designed primarily for window use, various supplementary pieces and an October Wartime Lighting Guide.

6 Thousands of these amusing and timely posters have been distributed throughout the country in towns and cities. In each case the dealer wanted to have the display shown in his window or store, despite the fact that oftentimes he had an actual merchandise shortage because of war restrictions. But the National Carbon Co., Inc., makers of Eveready flashlights, have found that dealers actually look forward to these institutional types of display pieces. This one of the tough sergeant was created as a more appropriate poster for wartime use than a new one for the company's nationally familiar boy-and-dog series. Display by Kindred, MacLean & Co., Inc.

7 Adapting to display use the Greek revival style of architecture of the stately southern plantation mansions with their lofty Doric columns, Old South Perfumers have created this handsome counter unit for its dealers. The company is distributing the unit to its dealers throughout the country for display of its line of Old South Toiletries. Unit made by Rockford Showcase & Fixture Co.

8 Current five-unit display for Higgins Ink Co., Inc., stresses the company's five chief inks. The girl on the center poster highlights the oldest and most familiar of the inks—Higgins black drawing ink. Although the display is shown as a complete window arrangement, it may be broken up into its units. The story of the packaging of these inks is published elsewhere in this issue. Display cards made by Keystone Litho Co.



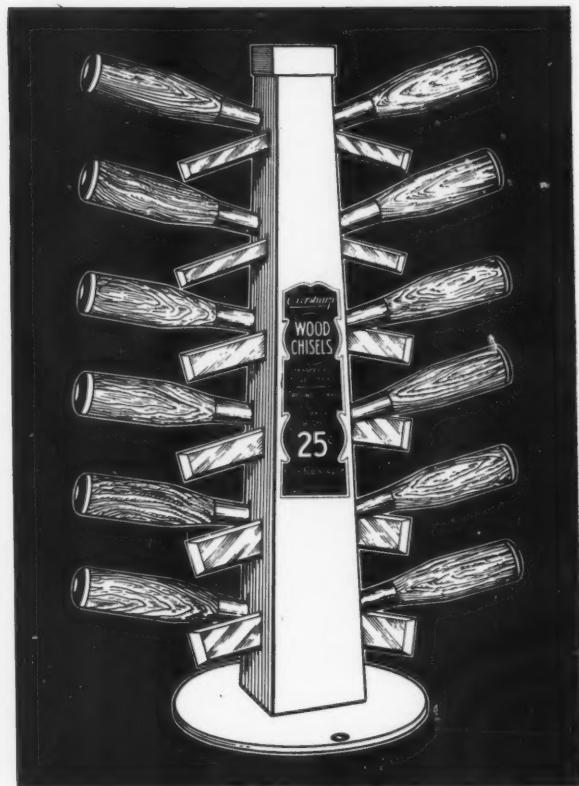
6



7



8



Can opener display has real can and real opener. Tower display for chisels made of fibreboard.

Memory joggers in a hardware store

by Arthur H. Van Voris*

Stocks of manufactured merchandise, in many lines, are becoming depleted so rapidly that the retailer is in a constant quandary to figure out some means of upholding his volume of sales. The actual format of numerous items has changed; for example, a substitution of glass or plastic for certain previously constructed metal parts. In many cases, too, it's a question of taking what merchandise is readily obtainable in view of decreasing production of many kinds of civilian consumer goods. In general, customers are inclined to accept these present factors in good spirit and are willing to be guided by the suggestion or advice of the retailer in making their purchases.

However, there is a constant "alert" confronting the retailer—how to hold the volume of sales, because of an increasing number of shortages and cancellations on his orders. Happily, there is one very real answer to his query—to concentrate in an ever larger way on counter displays, on packages or counter display merchandise.

For the hardware store, at least, there is an innumerable range of general purpose and household utility items that are available from easy sources of supply and such items possess

two extremely potent merchandising qualities: (1) popular demand; (2) quick turnover.

Their application to the hardware store is not a panacea or a cure-all for the growing scarcity of many products. However, this counter-displayed merchandise, because of its self-selling propensity, does assist in maintaining a much more satisfactory volume of sales than if it were overlooked or neglected by the retailer.

An examination of these counter display merchandise items will show what makes them "click" as cash register bell-ringers. Perhaps the majority of them have a certain universal customer appeal—a use reminder.

All of these items are, at the present writing, merchandise displays in spot-location on our counters or tables. Doubtless we shall be compelled to replace some of them with new items as time progresses. Also those mentioned are to be regarded as merely representative, inasmuch as they by no means constitute our entire stock of this merchandise group.

Furthermore, they will be recognized as belonging to the lower-price bracket. In a hardware store there are ever so many upper-price bracket products which account for sales volume in its larger sense, but many small sales help to swell volume and they merit genuine respect from the retailer.

* Van Voris Hardware, Cobleskill, N. Y.



Two Powerful Destroyers of INSECT PESTS ... in CROWN CONTAINERS

THE Shell Oil Company fights insect pests on many fronts... for Shell's special insecticides are used in homes, farm buildings, and for direct application to livestock of all types.

Both Shell Tox and Shell Livestock Spray are packaged in Crown Cans... in sizes running from a pint to a gallon for domestic use... in gallon containers and larger for farm use.

Protection against insect pests of all varieties has

become doubly important in war time.

Crown Cans protect this protection—in shipping, in storage, and in use. Before the present shortage of materials, Crown was proud that its containers were selected for Shell's complete insecticide line.

**CROWN CAN COMPANY, PHILADELPHIA,
PA., Division of Crown Cork and Seal Company.**
Baltimore • New York • St. Louis • Houston •
Madison • Orlando • Fort Wayne • Nebraska City.

CROWN CAN

Eversharp Wood Chisel Display: A tower display made of fibreboard, constructed on a base occupying only six inches of counter space, holds an assorted dozen of 25-cent wood chisels stuck into the tower at angles. Handle and blade of each chisel are visible. As a member of the tool family, these may be difficult to obtain in the future. They indicate the self-salability of a very popular-priced tool item for the handy man or householder. The same might be said for a large number of other carpenter or mechanic tools in a similar price class and although a bona fide carpenter might frown at their quality, it must be remembered a hundred householders will see them to one honest-to-goodness carpenter.

Norton Grinding Wheel Rack: This is an orange-colored wooden rack, 14 inches long with a trough at the bottom in which the retailer can place about a dozen assorted sizes of grinding wheels. An 8-in. high panel at the top of the display carries the Norton caption. A grinding wheel is an item of replacement rather than initial or original sale. This display is well planned and reminds the mechanic or farmer that his old wheel is pretty well worn or perhaps cracked or broken. The display prompts the memory and thus makes a sale, which might not be made if the wheels were in a cabinet or in a stock drawer.

Lucky Strike Faucet Washers: What householder has not been thoroughly annoyed at one time or another by a leaky kitchen or bathroom faucet? This display suggests a sure remedy for the expenditure of a dime. The display carton contains one dozen assortment boxes of faucet washers. Each individual box has a die-cut cellophane-covered window to show the contents. (Ed. note: Merchandise probably packaged before WPB restriction orders on cellophane.) We account for sales of many dozens of these assortments from our counter displays. The reminder is this caption: "Repair Those Leaky Faucets, Quickly, Permanently."

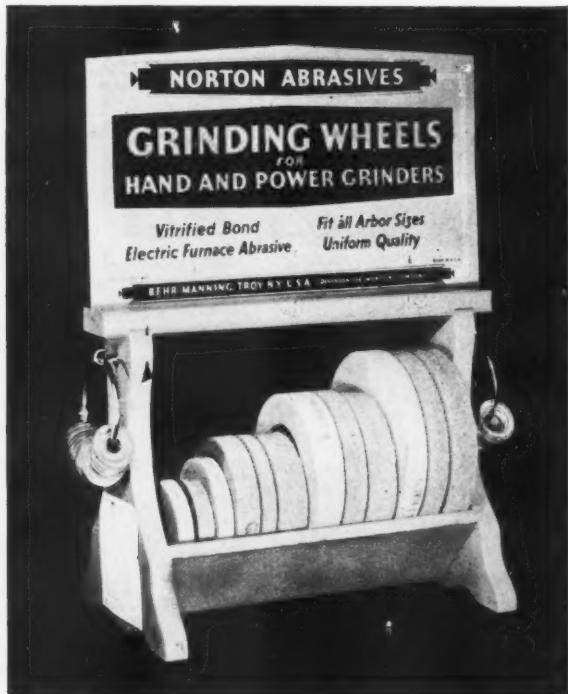
DuPont Cellulose Sponges: First-class articles for use in the

home or garage and of sustained repeat sale. Different sponge displays are offered by the manufacturer, but we prefer the one which contains different sizes of sponges. For example, the shopper can thus select one for washing windows or woodwork or a larger one for washing his car. The tumble-type display container is brightly lithographed. We find this type of item to have unusual self-selling possibility. We also sell natural sponges, both grass and wool, so called. These are displayed in an enameled wire rack of floor size. We frequently place this on the sidewalk directly in front of one of our store windows. Many customers stop and make a selection from it when entering or leaving the store. I believe both of these displays prove that when the right product is opportunely and invitingly shown by a convenient method customer reaction is responsive.

Royal Crystal Electric Fuse Plugs: Only a 5-cent seller, or a quarter for a box of five, but what a job of selling is done by display! "Have Them About When the Lights Go Out" is the reminder caption and the display unit is constructed of heavy gage wire, is in rack form and revolves on a set base. It has several compartments on its circumference so that approximately one dozen boxes of five fuses per box can be slipped into each rack space. The bottom box in each compartment slips out readily and can be fed in again from the top. One extra good feature of this display, which unquestionably can be made to apply to many other items, is its ability to increase the unit of sale. Prior to receiving the display from our jobber, when customers asked for a fuse plug, they meant *one* fuse plug. Now they see them in units of five to the box and in more cases than otherwise, they buy a box for a quarter instead of a single fuse for a nickel.

Thermoplax "No-Burn" Kettle Knobs: These are a boon to the housewife who has broken or burned the knob from her percolator or tea kettle. This easel-backed panel of the display unit is made of substantial (Continued on page 110)

Tumble-type container holding the ever-useful sponge is brightly lithographed. Orange-colored wooden rack with trough filled with assorted sizes of grinding wheels.





SONG OF THE WOOD WINDS . . .



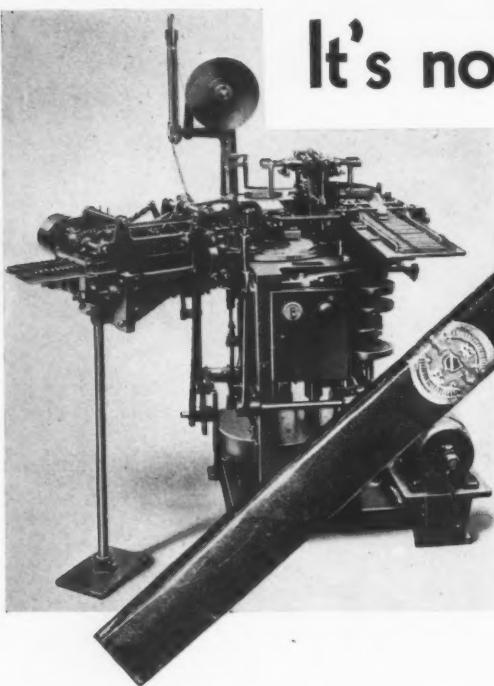
TRANSLATED INTO SELLING HARMONY

BY SKILLED PILLIOD PACKAGE DESIGNERS . . .

No imitation has ever quite captured the sheer beauty, vibrant personality and unobtrusive richness of nature's fine wood grain patterns. In the hands of Pilliod package artisans, these wood characteristics are enhanced—translated into sales strategy that works miracles. Adaptable and inexpensive, wood packages speak a persuasive language that shows up in profit records, and heightens product prestige. *** Wood has an ageless heritage in war and peace. Today, again, it shoulders many big war jobs. So . . . our present civilian-use volume is necessarily limited. But our planning facilities are available as always. Why not ask our package designers to help you develop a "spotlight" strategy for future counter attacks? If your current packaging problem carries a war rating, we may have the answer, for immediate production.

THE PILLIOD CABINET COMPANY • SWANTON, OHIO

THE FINEST PACKAGES GROW ON TREES



It's now wrapping RADIO BATTERIES for the Army



The wrapping machine which helps to keep your cigars in fine condition supplied a quick answer to the problem of giving a protective covering to the thousands of small radio batteries needed for the Army.

This is a good example of the remarkable versatility of the modern wrapping machine . . . Equally important, it illustrates how war wrapping problems will pave the way for many valuable peace-time advancements.

Aware of this, our Engineering and Designing Department is now engaged in laying the ground-work for future improvements which can be fully utilized when civilian activities are again given the green light.

OUR WAR-TIME SERVICE

aims at more than merely keeping present machines in good operating condition . . . We are also building machines for wrapping products vital to the war effort . . . And we have inaugurated a special service for those who cannot obtain new machines. If you will let us know the *type of machine* you need, or the *kind of wrapping* it must do, we will endeavor to locate a manufacturer who can *sell or lease* you one of our machines that will meet your needs. This service is gratis, and we neither buy nor sell any of these machines.

Phone or write our nearest office

PACKAGE MACHINERY COMPANY, Springfield, Massachusetts
NEW YORK CHICAGO CLEVELAND LOS ANGELES TORONTO
Mexico: Agencia Comercial Anahuac, Apartado 2303, Mexico, D.F.
Argentina: David H. Orton, Maipo 231, Buenos Aires
England: Baker Perkins, Ltd., Peterborough Australia: Baker Perkins, Pty., Ltd., Melbourne

Sulfanilamide for soldier's kits is protected by a dust-proof, weather-resistant wrap with easy-opening tape. The machine that produces this wrap is our CA-2, widely used for chocolate bars, headache powders, plug tobacco, etc.



Bandages for the Army are wrapped on our versatile FA model, which is adaptable to any type of material, and is adjustable for a wide range of sizes.



Tons of hard candy for the Army are wrapped on our 22-B. One operator can wrap 150 pieces per minute.

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

PACKAGING PRODUCTION and TECHNIQUE



Streamlined exterior of Acme Breweries' new million dollar bottling plant.

Mile long beer line

Embodying ultra-modern construction features such as the streamlined façade of glass block, Acme Breweries' new million dollar bottling plant in San Francisco, Calif., offers something of special interest in the way of conveying equipment for speedy and economical handling of bottled beer.

Integrating all bottling, storage and shipping activities in the five-story building—newest unit in the pioneer brewery which produces a fourth of the packaged beers sold on the Pacific Coast—a mile-long conveyor takes up where bottling lines end, automatically transporting cases and cartons to designated storage spaces, or to waiting trucks, without a single gap which requires the use of hand trucks or other means of manual handling.

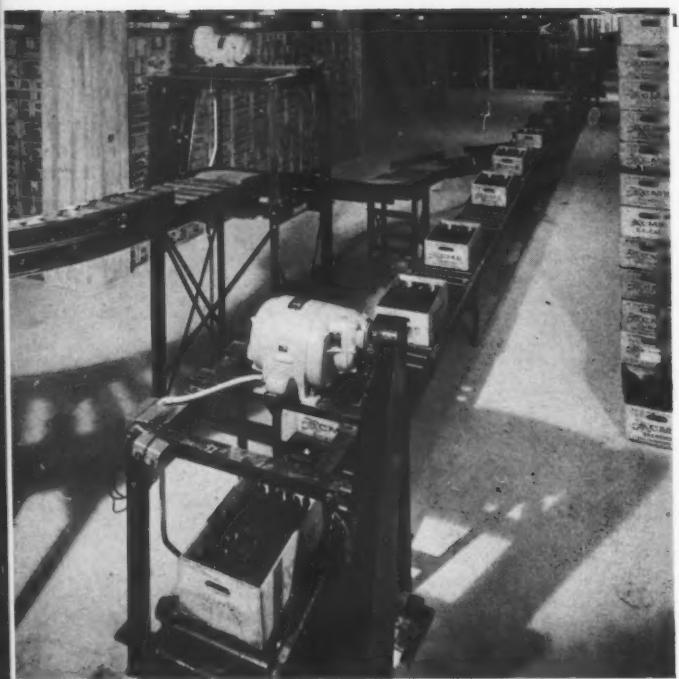
Over the intricate network of conveyors, criss-crossing the five floors in a pattern that conforms precisely with the interior arrangement and position of each item of bottling equipment, bottled beer containers reach and, in fact, are conveyed into the interior of waiting trucks in a matter of seconds. With the same automatic precision cases of empty bottles, unloaded from trucks, are sent directly to the bottling floor. Passing through the mile-long conveyor, empties are shuttled to the desired bottling line or to designated storage places when not immediately needed for refilling with newly brewed beer.

Aside from the speed of handling the day's production of

bottled beer, whether for storage or immediate shipment to distributors and consumers, the 5,700-ft.-long conveyor effects a type of flexible operation seldom if ever attained in a plant of similar size and scope. It begins with the entry of a truck into one of the 12 loading bays, built into the building front, to deposit its load of empty bottles. Once the waiting conveyor has been extended into the truck interior by a stevedore-type coupler, the empties travel in an even, steady line directly to the mouth of a soaker on the fourth floor and thereon to the bottling line. Or, when desired, all or a portion of the cases of empties are diverted by the same conveyor for storage, this being done automatically by electric controls and the use of various types of diverters, hinged curvers and decline belts.

With bottles thus fed into the soaker, the conveyor enters another phase of integrated bottling line production, continuing to convey the empty cases to a point where they meet filled bottles emerging from the sealer. Without a second's lag, the former empty cases, now filled with newly bottled beer, continue to move to truck loading bays or to storage space.

Indeed, it is not unusual for a truck delivering a load of empties to receive the same cases a few minutes later, but filled with bottles just off the bottling line. More incredible



is the speed in the unloading of empties and loading of fulls on the same truck. By actual count a thousand cases have been unloaded in a period of only 35 minutes, with similar performance characterizing the loading of full bottles.

The how and why of this type of speedy, flexible conveyor operation is explained by the fact that in planning the construction of the million dollar bottling plant, the Acme Breweries incorporated the conveyor system into the from-the-ground-up blue print. Each extension of the mile-long conveyor was planned and placed to coordinate perfectly with bottling line layouts and storage space facilities. Nothing was left to afterthought, not even provision for future expansion of bottling line facilities. At present the bottling plant operates with three bottling lines, but the blue print calls for a maximum of six lines, to be completed when war conditions permit or after the war. With characteristic thoroughness, the management has already made provision for additional conveyors which will be integrated with planned future additions and will follow the same fundamental plan of efficient, economical operation.

Considered as a bottling plant of the future, with its ultra-modern façade, latest bottling equipment and method of arranging the lines and integrated conveyors, the Acme building offers much of interest to packagers studying trends. It occupies 275 by 137½ ft. of ground area, is constructed of concrete with reinforcing steel, utilizes 21,368 glass blocks for frontage, which flood the interior with an amber glow characteristic of the Acme beer bottles, and has 202,900 sq. ft. of floor area, much of it used for the storage of approximately half a million cases of beer. Except for areas held in reserve for future expansion, where foundations have already been built for that purpose, not a foot of space is wasted on the production flow impeded.

Not only are conveyors used to excellent advantage in moving bottles to and from the bottling lines, but they are also employed in disposing of used cartons for wartime conservation of paper. Among other conveyor ideas introduced in the new plant is a method of feeding new cartons to bottling lines with elimination of hand trucking and other time-consuming inconveniences.

Packagers visiting the fifth floor, which is devoted exclusively to bottling, are impressed by two interesting instances of conveyor efficiency. First, as bottles come off any of the three bottling lines, sealed and cased, they immediately leave the floor. They are carried by combination gravity and hot-roller type conveyors to the second floor which is used for the storage of fulls. There the flow from bottling lines can be instantly diverted when desired to feed waiting trucks on the street floor without the necessity of first stacking or storing the cases.

Second, cases of empty bottles as they are unloaded from trucks do not at any time reach the bottling floor. They are conveyed instead directly to the third floor, which is used exclusively for storage of empties, or directly to the fourth floor into the soakers, emerging on the bottling lines completely washed and pasteurized, ready to be filled with beer or ale.

Another fact worth noting is that floor space in the bottling



1. Cases of empties brought from truck bays to third floor can be directed automatically to fourth floor for feeding to soakers. 2. Four conveyor lines handling cases of empties converge to two lines on third floor at the same time changing their speeds. 3. Cases of empties go through sorting station where bottles are routed to storage or to soakers.



room is not cluttered with empty cases waiting to be filled with full bottles. As empties are removed for feeding the soakers, the cases are placed on a belt which feeds the respective bottling line. Traveling in a straight line but at an incline from fourth to fifth floor, the empty cases appear at a point approximately midway of the pasteurizer, continuing the slow but steady travel to meet the sealer and to take on the cargo of filled, labeled and capped bottles. All these operations take place without the cases being lifted from the line and without a halt until, in the conveyor line, it reaches its destination on the second floor storage or inside a waiting truck in one of the bays.

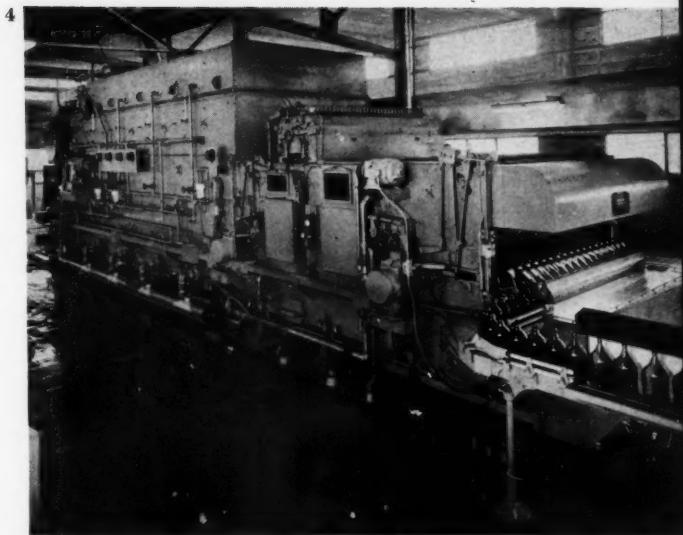
In the bottling room there are three conveyor lines with provision for three more. They parallel each other across the length of the room, running from the south, where soakers are located, to meet the conveyors at the north end. The soakers and washers, fed from the floor below, are synchronized with bottling lines to handle the various size bottles. The first of these lines is to a specially built soaker, operating on the air brush principle, designed to handle the 32- and 64-oz. bottles with standard size necks. It is said to be the largest air-brush soaker ever built, weighing $96\frac{1}{2}$ tons when operating. Two of the bottling lines are designed to handle 11-oz. exports and steinies. The third, a utility line, has been laid out for 32- and 64-oz. glass bottles and tin cans. A feature of the bottling line arrangement is the use of liquid labelers, arranged in batteries of four and operating simultaneously, so that in event of a breakdown in one line, others take up the lag to continue normal production. Conducive to the even, never-ending flow is the use of four packers, including two for cans, and three sealers and gluers in constant operation. Two of the lines, handling the standard size bottles, have a production of 240 bottles a minute each, while the utility line delivers 55 half gallons, 110 quarts to 325 cans a minute.

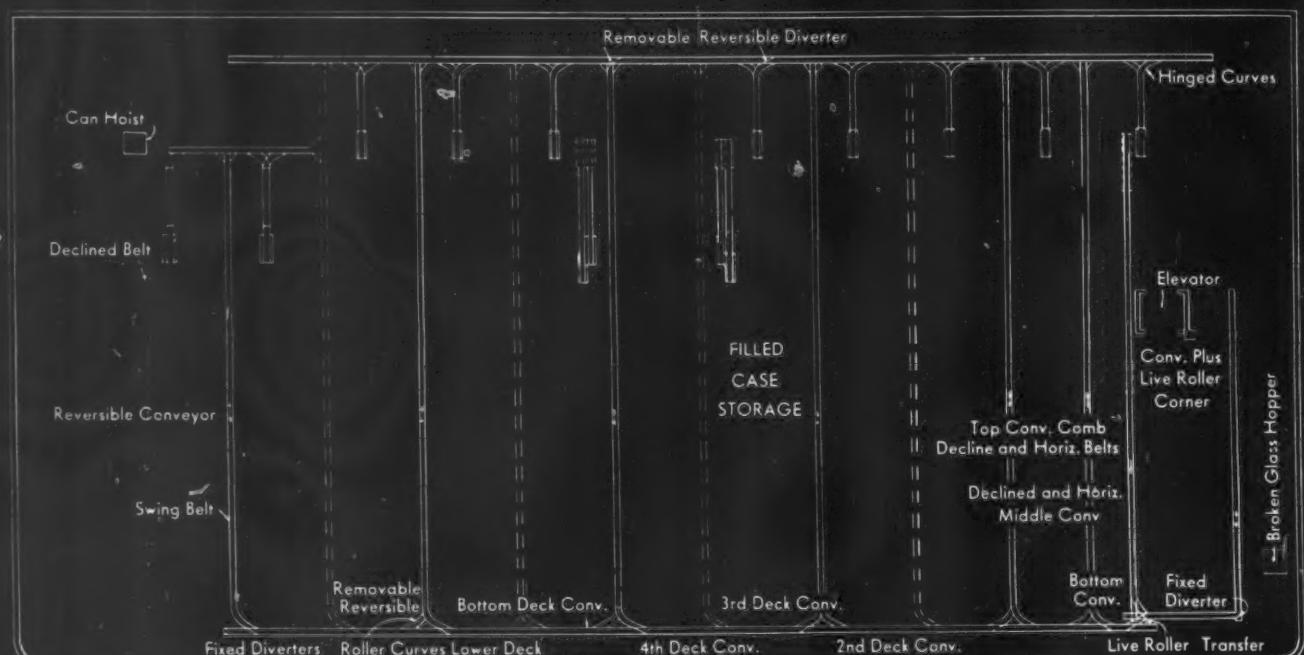
Aisles between bottling lines are spacious. Circuit breakers, starters and control equipment for bottling machinery have been located in elevated panels at the head of bottling lines. Mounted on platforms seven feet from the floor, electric controls are never affected by moisture emanating from bottling lines and their elevation also leaves unobstructed passage between conveyor and bottling lines. Because of the special cellular steel floor construction, all feeds to motors and control stations come directly from the floor as needed. Thus, future expansion of bottling lines, for which floor channels have already been built and space for conveyors provided, can be effected without changing the arrangement of the bottling floor.

The fifth floor, known as "machinery hall," and used exclusively for bottling is equipped with a 5-ton monorail crane for the conveying of heavy equipment. By this means machinery can be easily removed for repair and maintenance through floor openings. In addition, there are heavy-duty elevators at each end of the building, augmented by manlifts. These are essential parts of the extensive conveyor system, as are also the special types of conveyors for disposing of used cartons and feeding new ones to the bottling lines.

Upon leaving the bottling lines, (*Continued on page 86*)

4. Giant-size soaker in Acme plant said to be largest air-brush washer ever built, especially designed to handle $\frac{1}{2}$ -gal. bottles. **5.** Liquid carbonic filling machines. Note short lines connecting soaker, filling machine and pasteurizer. **6.** Conveyor system on second floor showing how the cases of fulls are diverted to truck loading bays.



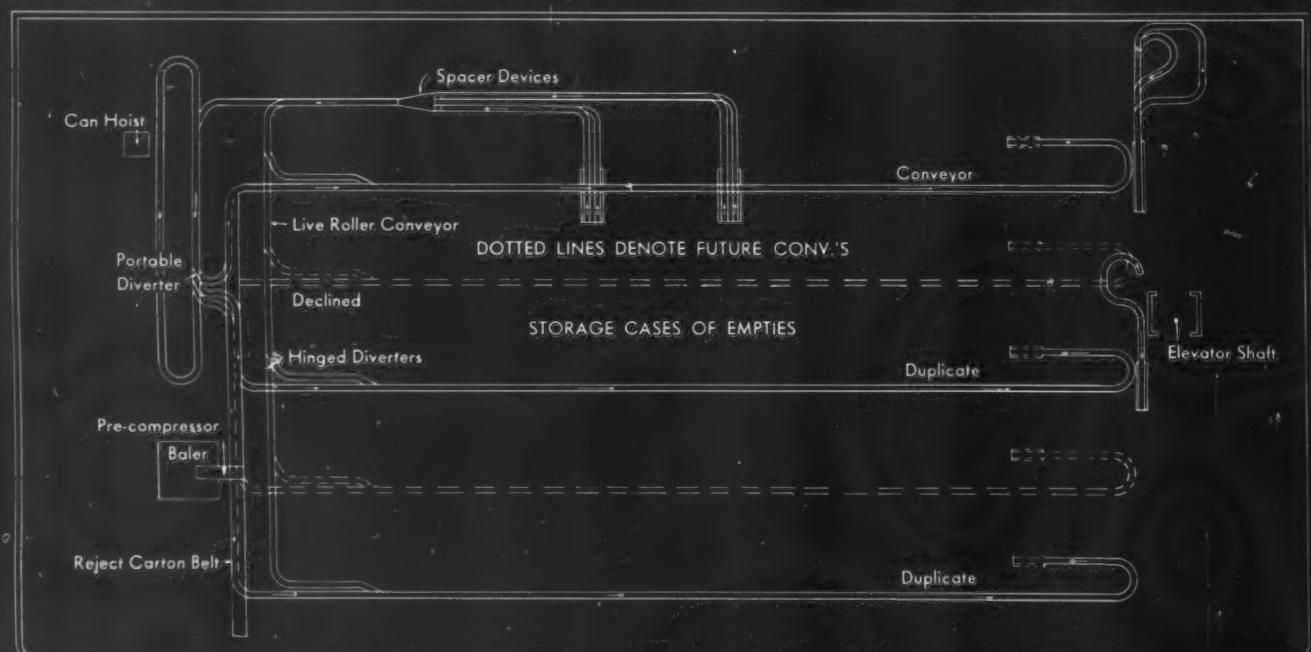


SECOND FLOOR PLAN

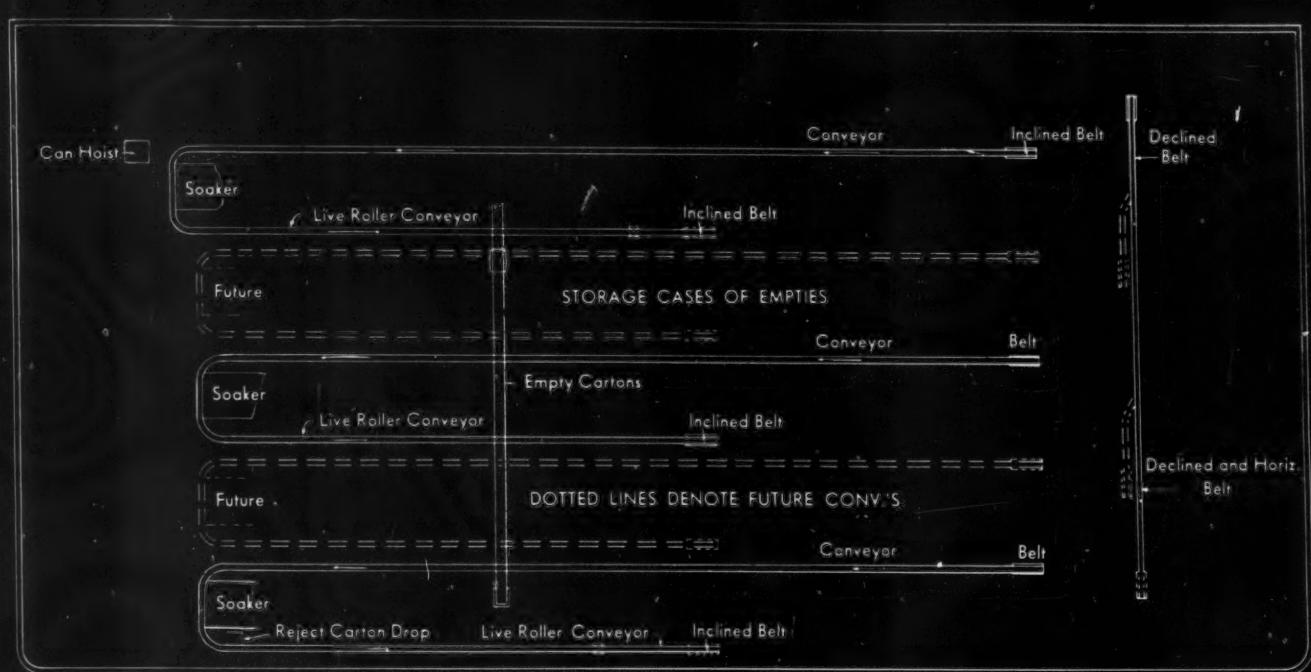
ELEVATION A-A

2nd Floor. Cases of fulls enter by conveyors from bottling lines on fifth floor. Flow continues on four-decker conveyor arrangement on east end of floor, connecting with cross conveyors which distribute load to storage bays. At north end, are nine decline belt conveyors for feeding cases of fulls direct to trucks at first floor. 3rd Floor. Cases of empties enter third floor from truck bays on first floor. The four conveyor lines join at north end. Flow continues to sorting station at south side where different sizes are distributed to conveyor lines feeding storage bays or fourth floor.

(Page 84)



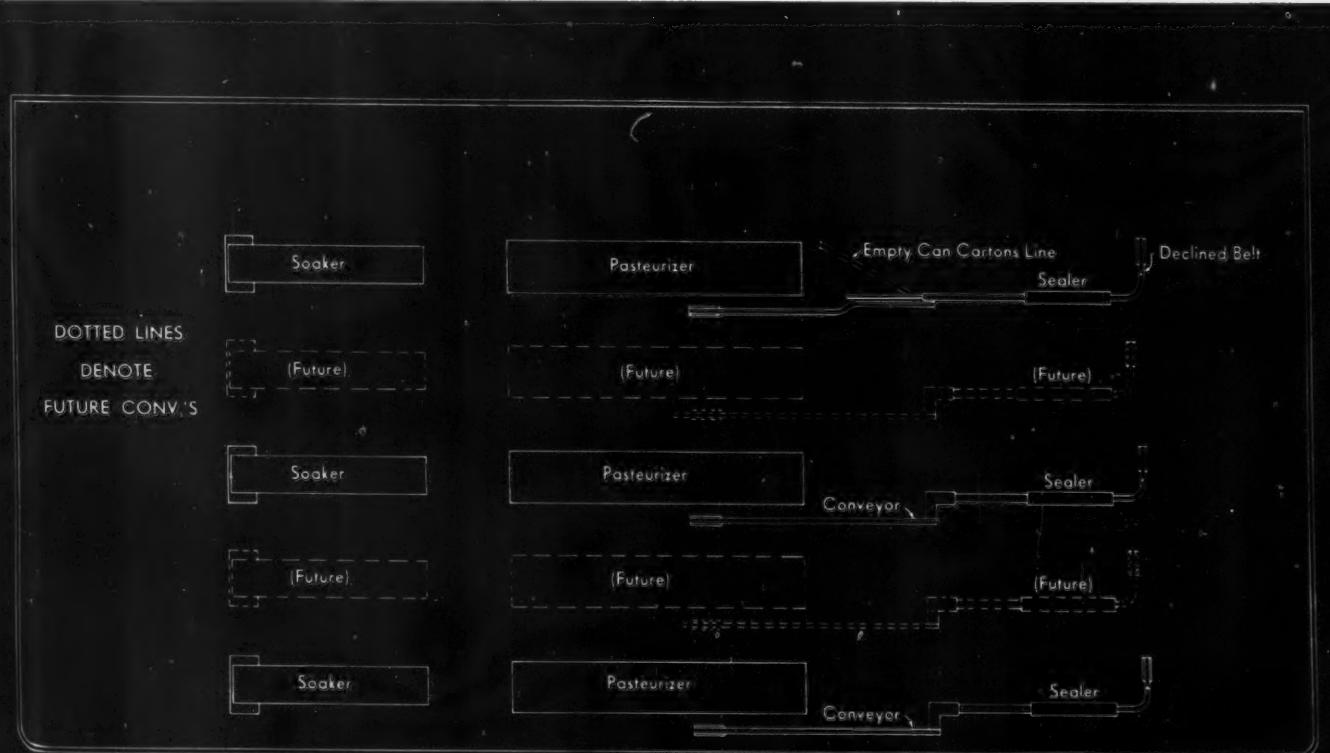
THIRD FLOOR PLAN



FOURTH FLOOR PLAN

4th Floor. Conveyor lines running north to south feed empties directly to the soakers. The same conveyors are used also for storing the empties in the various storage bays.
5th Floor. Note conveyor arrangement on the bottling floor. Empty cases are fed directly from fourth floor to a point where they emerge near the pasteurizers on three bottling lines. As cases continue on conveyor they are filled with bottles which have been filled and sealed. The cases of fulls then proceed on conveyors at the north end directly to the second floor for storage or diversion to truck bays on the first floor.

(Page 85)



FIFTH FLOOR PLAN



cases of beer continue on conveyors to the north end of the fifth floor. There the three conveyors enter openings in the floor, permitting an uninterrupted flow to the second floor, which is used exclusively for storage of fulls. The manner in which each load of fulls, conveyed from bottling lines, is distributed to storage bays on the second floor or automatically reconveyed to trucks, impresses the visitor.

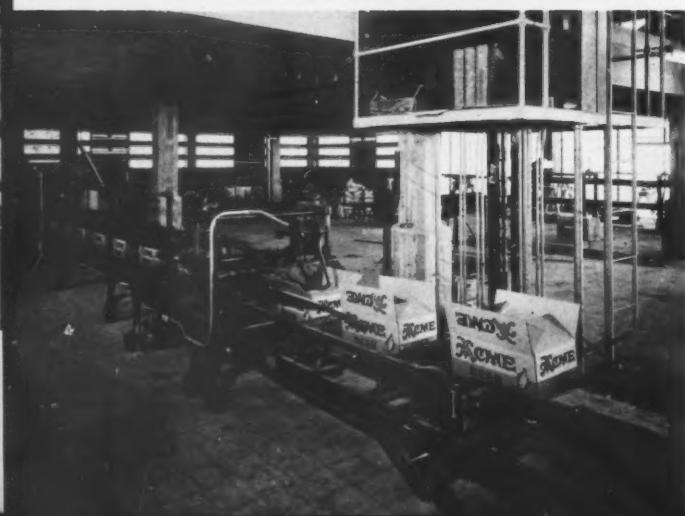
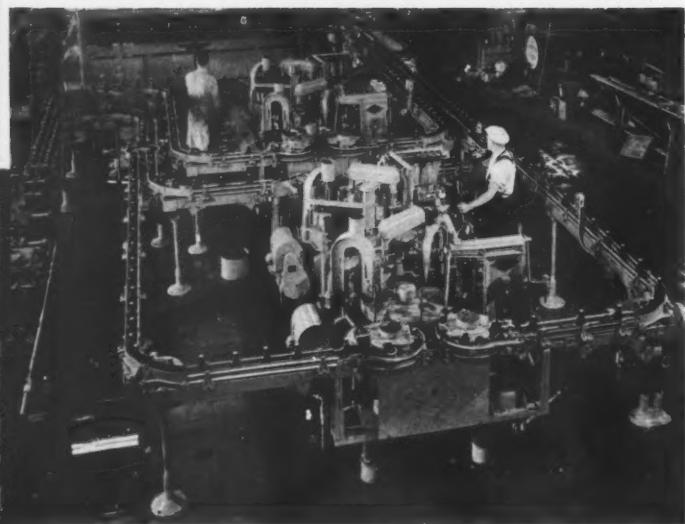
The three conveyors, running parallel and in juxtaposition to the corresponding bottle lines, converge in a one-line formation upon reaching the second floor. To save space and to effect the speediest possible distribution of the load, the three conveyors are elevated above each other in a straight line, running north to south on the east end of the floor. At designated spots in the line, these conveyors connect with crosswise conveyors for direct distribution of the load to storage bays. To connect with these crosswise conveyors, there is an arrangement of seven swing belts operating with counterweights.

When it is desired to store a batch of cases coming from any one bottling line, the first step is to select an available storage bay. That done, the next step is to connect the crosswise conveyor which feeds the respective storage bay. This is done by coupling a swing belt and automatically directing the flow from bottling line to the designated storage position. Directly below the three-decker conveyor is another, which is reversible and is used to effect any distribution of fulls to various parts of the floor. This lower deck connects similarly with the crosswise conveyors by the swing belt couplers.

Should the particular distribution call for feeding the batch of fulls directly from bottling line to truck, the conveyor system is flexible enough to handle this job automatically, with utmost speed, and without costly changeovers. The flow of fulls continues on to any one of the crosswise conveyors. Instead of being removed for storage, the cases are permitted to continue to the west end of the building, where they are diverted to any one of nine decline belt conveyors which travel through openings directly to the first floor, which is used for shipping as well as additional storage of fulls. To connect with the nine decline belt conveyors feeding the truck bays on the first floor, there are diverters and hinged curves.

The entire operation, whether storage or shipment of fulls, is controlled from an observation office overlooking the second floor. Directions are given by loud speaker for opening any of the crosswise conveyor lines and for coupling up with any of the nine decline belts to the first floor. For utmost flexible operation, each line is equipped with push-button, electric control. Many of the conveyor units travel in reverse direction. Some of the units operate by gravity, others by hot rollers, that is, steel rollers which are propelled by moving belts, depending on the grades (in some instances averaging 28 deg.) and by other operating conditions.

When the flow of fulls reaches the first floor, it can be diverted in two directions. It may be diverted to any one of the 12 truck loading bays, built into (Continued on page 104)



7. Four-decker conveyor arrangement on second floor. Upper three connect with three bottling lines on fifth floor. Lowermost conveyor used mainly for distributing cases of fulls to storage areas. 8. Cartons are conveyed directly to bottle packers. 9. Arrangement of labelers in one of the three bottling lines. Liquid labelers are in batteries of four and operate simultaneously. 10. Gluer and case sealer on one of the lines. Elevated panel houses the circuit the breakers, starters and the control equipment for bottling line.



Battery in Action ON THE PACKAGING FRONT



Granted that you can't kill Axis enemies with Morrison Wire Stitching Machines.

But the fact remains that batteries of those machines are in action in war plants—speeding up the job of assembling and packaging parts for planes, ships, tanks, guns, and other war equipment.

Features engineered into Morrison Wire Stitch-

ing Machines are now proving their advantages under the impact of wartime production schedules.

The advantages of wire stitching as *the fastest method* of assembling and sealing corrugated and solid fibre containers, PLUS the distinctive features of Morrison Wire Stitchers, make an unbeatable combination . . . a point that merits the careful investigation of post-war planners.

SEYBOLD DIVISION

Harris-Seybold-Potter Co. • 826 Washington Street, Dayton, Ohio

SEYBOLD SALES AND SERVICE

New York:
E. P. LAWSON CO., INC.
426 West 33rd Street

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CHAS. N. STEVENS CO., INC.
112 West Harrison Street

Detroit, Michigan:
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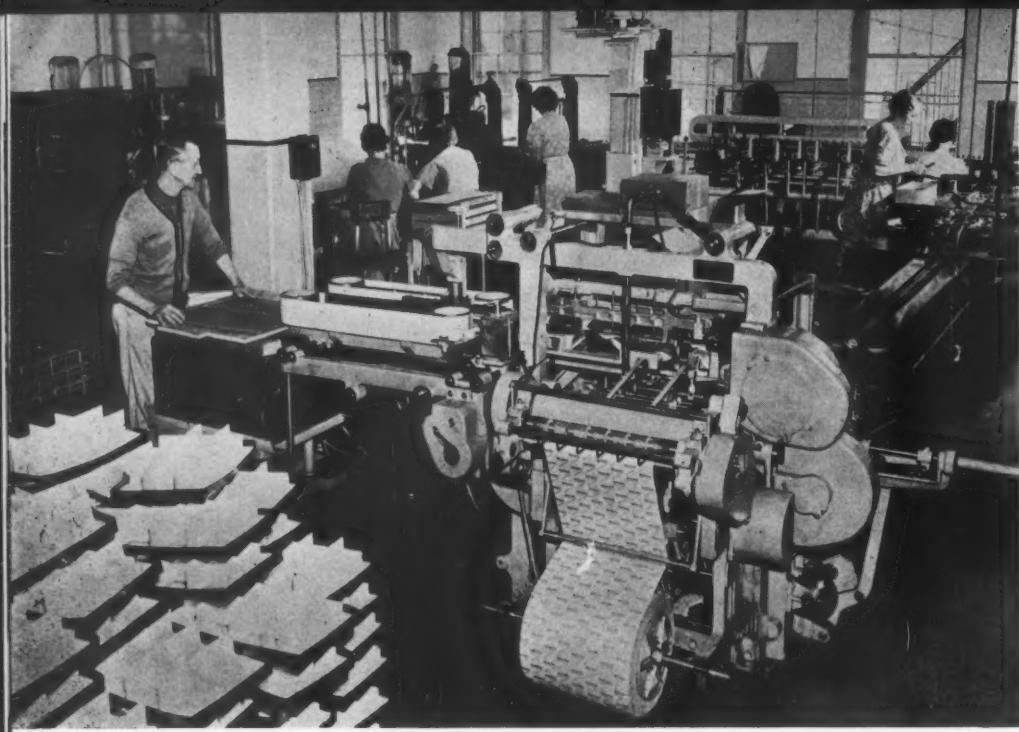
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HARRY W. BRINTNALL COMPANY
San Francisco, Los Angeles, Seattle

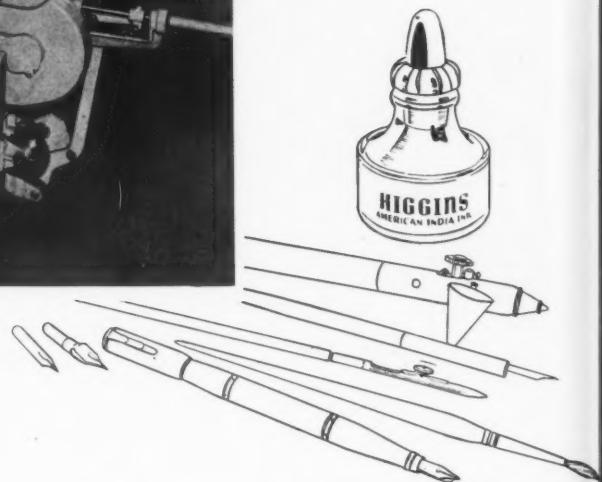
Canadian Distributor:
HARRIS-SEYBOLD-POTTER (CANADA) LTD.
Toronto and Montreal

MORRISON

WIRE STITCHING MACHINES



*Corner of Higgins plant.
Workers tending the horse-
shoe cycle of machines are
producing $\frac{3}{4}$ -oz. bottles of
the waterproof India ink.*



Higgins ink

Among the old brownstone fronts of a once fashionable residence section in Brooklyn is a busy factory. The casual passerby could go right past it with no realization that there is the point of origin for packaged drawing inks which have been going to the far corners of the globe for more than half a century. The front of the old mansion is marked by a dignified tablet bearing the name of Chas. M. Higgins Ink Co. What was formerly the secluded garden back of this residence is now the location of a manufacturing plant and nearby buildings are used for overflow storage and manufacturing operations.

Chas. M. Higgins, the founder of this business, had the perfect background for developing the Higgins line of products. Born in Ireland, his family migrated to America in Civil War days. When he reached working age, his first job was with a concern which was later Devoe & Raynolds. Later he became a draftsman, a patent solicitor, an inventor and—literally—a kitchen chemist.

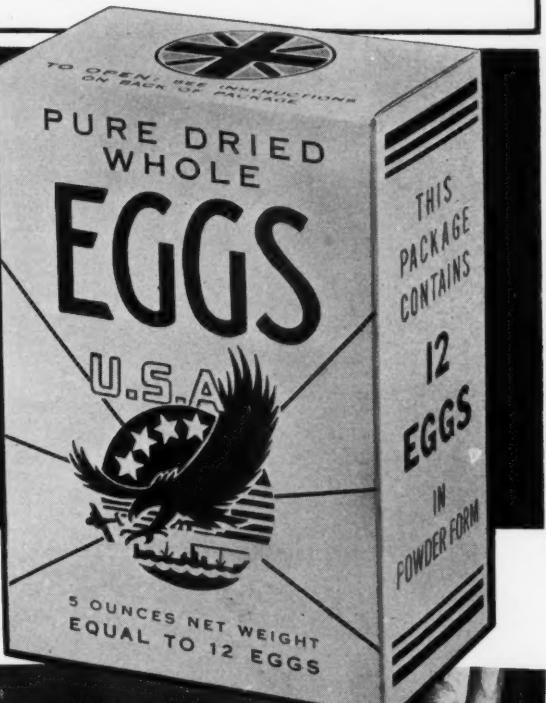
The draftsman in those early days ground up a dry India ink stick and by home-made methods produced what served for a black drawing ink. The slowness of the process and lack of uniformity of the finished product irked young Higgins and stimulated his inventiveness with the result that the dry stick gave way to the liquid product which was developed in the kitchen of the young inventor's older sister. At first the product was manufactured at home as a side-line while Higgins continued his work as a patent solicitor, but the business grew to the point where the firm, Chas. M. Higgins & Co., now known as Higgins Ink Co., Inc., was formed. The present quarters have been occupied since 1901.

From the start, it was but natural that the makers of these drawing inks should be very package-conscious. Probably

actuated by some irritating accidents at his drawing board, Mr. Higgins evolved the $\frac{3}{4}$ -oz. squat bottle which almost amounts to a trade mark for the Higgins Drawing Ink. With its substantial base, its steeple-top stopper and its quill filler, this package is undoubtedly familiar to draftsmen and artists all over the world. Strangely, in view of Mr. Higgins' activities as a patent solicitor and inventor, the formula for the Higgins drawing inks has never been patented. It is known to this day only to the members of the Higgins family.

Packages figure importantly in the Higgins merchandising and marketing programs. The company relies on distribution through some 7,000 or more wholesale houses and retail dealers. These distributors are supported by a consistent program of advertising and promotion and rare indeed is the Higgins piece which does not feature a package. The series "Visual Aids in Education" familiarizes the educational world with Higgins packages while presenting valuable and practical methods of using the product in the schoolroom. Photographs illustrate, for example, the method for making lantern slides, shade roller types of charts, pictorial symbols and maps through the use of various types of Higgins inks. The pictures are accompanied by simple explanatory text and captions easily understood by the average person. An octavo-sized booklet, "Techniques," has gone through four large editions. On every page of this booklet, which has proved tremendously popular with artists and illustrators, appears the well-known Higgins package, unobtrusively but effectively reminding the consumer of the well-known name. Pen and brush techniques are discussed and illustrated with drawings. Wash and scratchboard drawings, spatter and stipple work and the resist or imitation wood block methods are all treated

NEED HELP IN PACKAGING A DEHYDRATED FOOD?



MANY OF THE FINEST-PACKAGES developed for all types of dehydrated foods have grown out of the close collaboration of Stokes & Smith with some of the Country's largest packers. And, if you're entering this field, you'll find that we have done much of your basic work for you . . . can show you many a short-cut to your goal of speedy, economical packaging, in packages that really protect!

60 PER MINUTE is the speed developed in filling and sealing this dried egg package, using an S & S packaging line based on the S & S Neverstop Automatic Carton Feeding and Sealing Machine and three S & S Universal Fillers. This installation is a good example of the speed and economy with which dehydrated foods can be handled — and there's an S & S packaging line to handle them all!



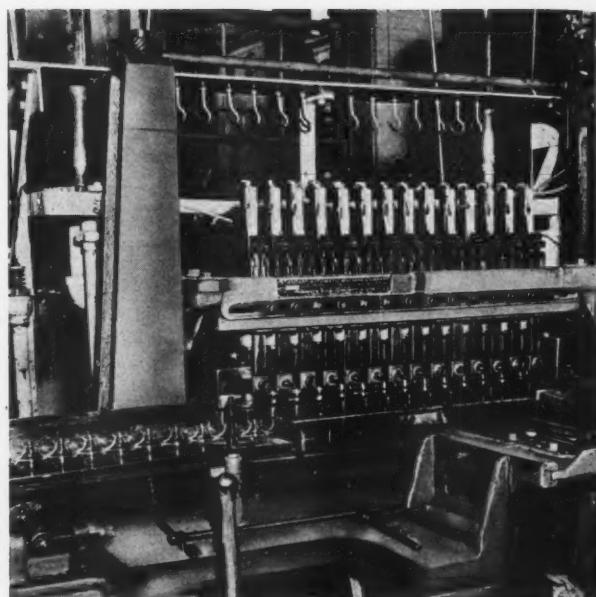
The packaging line shown above is operated by Samuel Dunkel and Co., Inc., and the package is one developed by the Reynolds Metals Co.



AUTOMATIC and SEMI-AUTOMATIC
PACKAGING MACHINES
by STOKES & SMITH CO., Frankford, Phila., U.S.A.



2



1

1. Like soldiers marching, a 14-“man” platoon of bottles waits in line to be filled with ink. Two vacuum tanks prevent foaming, equalize specific gravity, insure accuracy in filling. 2. Bottles filled and corked wait their turn under the corking bridge. 3. Filled, corked, but nameless the bottles progress to a labeling machine which spaces them for application of paste and label. 4. Bottles travel through a track that lays each bottle on its side and places it in a U-shaped receptacle.

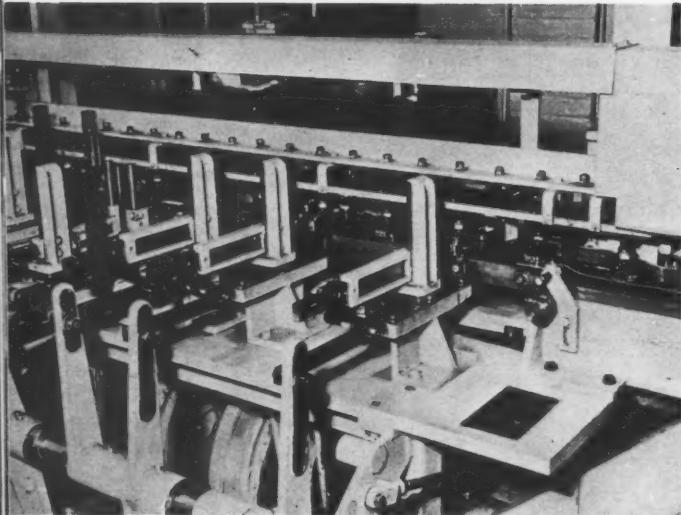
at some length. All of these are of particular interest to the artist or architectural renderer.

War activity motivated the development of the booklet, "Drafting Standards—Accepted and Proposed," which provides engineers and draftsmen with a useful reference manual on drafting room practice, welding symbols, ink hints and much other useful information. With the tremendous demand for war workers who have a knowledge of drafting, there has been widely increased interest in the subject. Since the booklet is fully authenticated, it is a valuable addition to any draftsman's library.

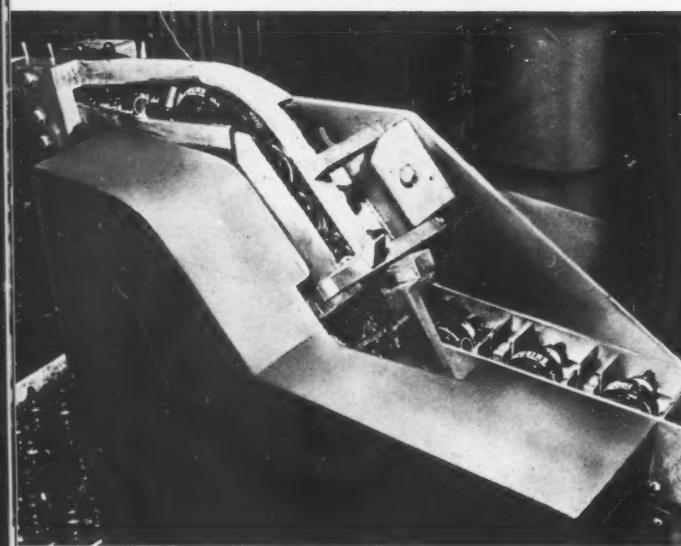
- The dealers who handle the Higgins line are kept supplied with merchandising helps consisting of folders which illustrate the different packages in the line, display containers which bring the product out on the counter and window display material which serves as attractive reminder advertising. Elsewhere in this issue appears one of the current Higgins window displays.

Perhaps the most effective means of introducing the Higgins line and maintaining acceptance for it, particularly among the oncoming generation of artists and draftsmen is Higgins sponsorship of two important classifications in the competitions conducted by *Scholastic* magazine. This paper has wide circulation in secondary schools and thousands of youngsters annually compete for substantial prizes. In this competition, properly enough, the product name is subordinated to the contest idea, but in the contestants' minds, the name Higgins and the Higgins packages come to be permanently associated with artistic endeavor.

The company boasts the only completely mechanized pack-



3



4



BLUE WILL BE BACK!

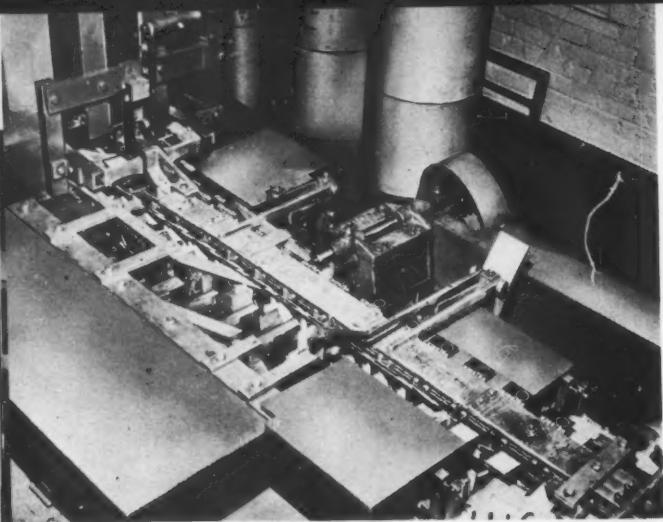
Unavailable now because of war restrictions, rich, royal Maryland Blue will be back to "stop the eye and start the sale" when you need it most—in post-war competition. Put a memo in your post-war plans file: "Look into the merchandising advantages of Maryland Blue Bottles and Jars."

Maybe Maryland makes the style you seek

Send for samples of Maryland Flint bottles and jars—available in many sizes—styled for selling such widely varied products as polishes and pharmaceuticals, cosmetics and cleansing fluids. Included among Maryland Flint designs are those formerly made in the famous (but now war restricted) Maryland Blue. Write, telling us the nature of your product and the sizes in which you are interested, and we will send appropriate samples.

Maryland Flint
Bottles & Jars

MARYLAND GLASS CORPORATION, BALTIMORE, MD.
.. New York: 270 Broadway .. Chicago: Berman Bros., 1501
S. Laflin St. .. St. Louis: H. A. Baumstark, 4030 Chouteau
Ave. .. Memphis: S. Walter Scott, 435 S. Front St. .. Kansas
City, Mo.: Aller Todd, 1924 Union Ave. .. Cincinnati: J. E.
McLaughlin, 401 Lock St. .. San Francisco: Owens-Illinois
Pacific Coast Co.

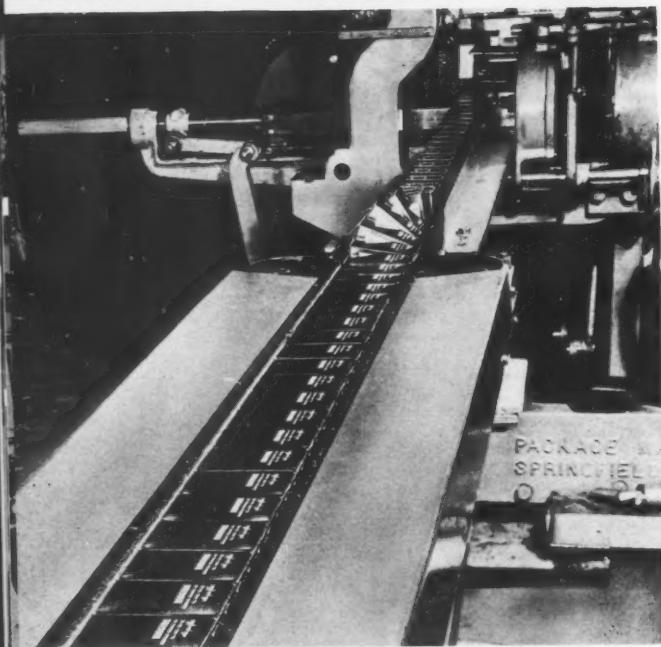


5

aging line for drawing inks. Crossing the dooryard from the old mansion, the visitor finds himself in the factory building where processing, packaging and shipping take place. The inks are compounded on one of the upper floors and are piped down to the packaging department on the second floor. Writing fluids have their own corner; the drawing ink packaging line is compactly laid out in a sort of horseshoe style where in a space approximately 40 by 45 ft. the standard output is maintained steadily at 60 bottles per minute. The washing operation is performed in the basement of the building. Experience has shown, so the Higgins people say, that for inks air washing does not prove so satisfactory or thorough as the old-fashioned water washing method—so they stick to water washing! In tote boxes, three or four layers deep, washed bottles are conveyed by elevator up to the packaging room to the first station in the packaging line. Here they are placed by hand on the conveyor belt which marches them to the vents of the filling machine. Two vacuum tanks prevent foaming of the fluid, equalize specific gravity and insure accuracy in filling. The $\frac{3}{4}$ -oz. bottle, by the way, contains really seven-eighths of an ounce of ink to allow for the last few drops that always remain in the bottle and for the unavoidable gathering of sediment always to be expected when the bottle is open on the busy artist's drawing table. The vacuum-filling method prevents waste. The filling machine is so constructed that if a bottle is defective it simply won't be filled at all.

Marching along, the filled bottles are corked automatically with the steeple-top stopper with the corks in place, the bottles are raised by slow and uniform pressure to expel the air, seat the cork and push the pen filler to the distance of one-eighth of an inch from the bottom of the bottle as called for in Federal specifications. The pen filler, formerly quill, is now an ingeniously contrived plastic device, especially shaped to deposit just the right amount of drawing ink on an inking pen.

The labeling machine sets the pace for the movement of the entire line. Labels are applied at the rate of 60 per minute—an all-around strip with over- (Continued on page 108)



6

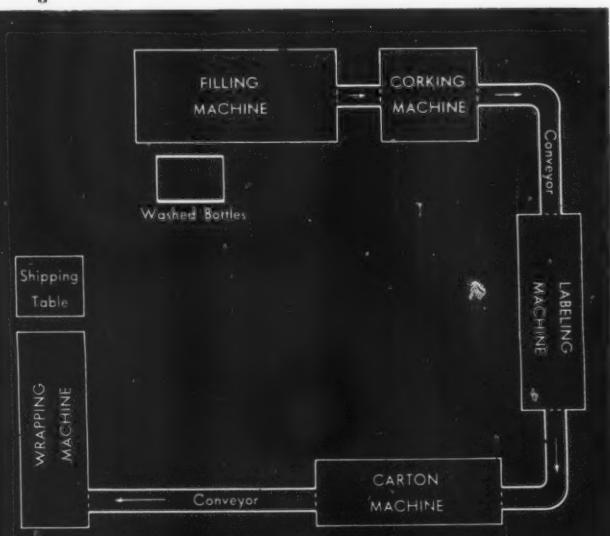


7

5. Carried on an endless belt past a counter, each bottle is pushed head first into its carton. 6. Cartons carry on through a track which, at the production speed of 360 dozen bottles an hour, is long enough to hold the sealed ends until dry. 7. Cartons are righted and a bank of six pushed into a bundling machine which wraps them with patterned kraft paper, cuts the paper and glues a label on each end of the package. 8. Flow chart of packaging line.

(Page 92)

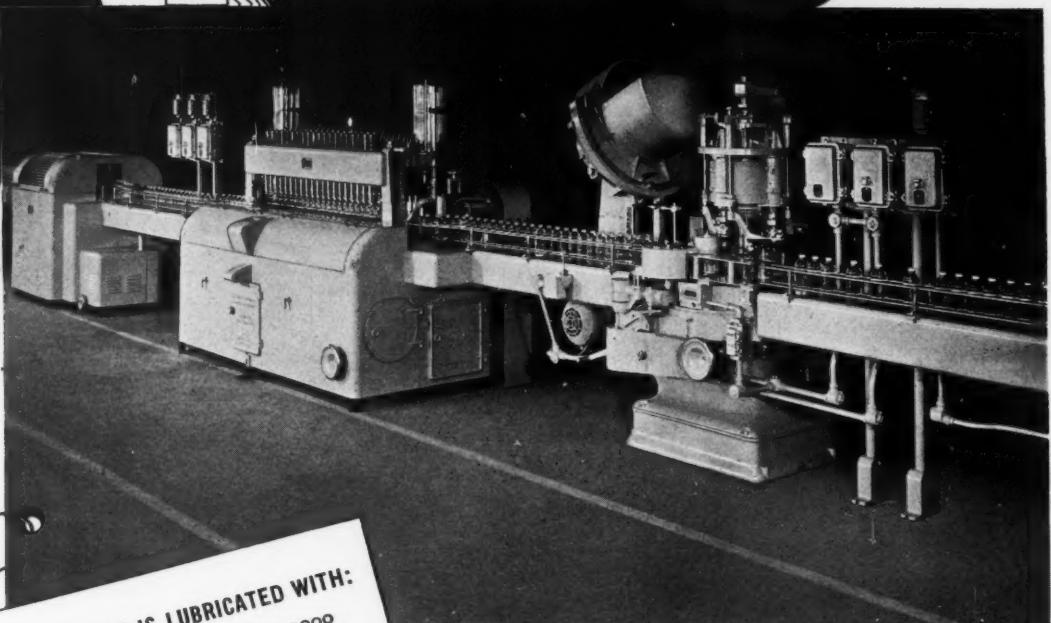
8





"USE SPECIFIED OILS AND GREASES"

TO SAVE WEAR - HOP UP PRODUCTION™



THIS MACHINE IS LUBRICATED WITH:

Grease applications	No. 0000
Oil applications	No. 0000
Gears and Cams	No. 0000

Important: For best results use the lubricants
specified by the machine builder.

SPEED Production is right. Laboratory testing has proved modern machines reach peak efficiency only when you lubricate scientifically.

"A single machine," says "Speed," "often requires a number of different kinds of oils and greases. To try to get by with just one oil or one grease is the bunk. For instance, you get into a peck of trouble if you use a heavy oil—instead of light—on a high-speed drive. Or a wrong type of lubricant on vacuum pumps will 'break up' and cause unnecessary heat and wear."

If you're in doubt as to just how you should (or should not) lubricate every moving part of your Pneumatic bottling

equipment, write to us for exact directions. It makes no difference whether you have complete Pneumatic bottling lines consisting of cleaners, fillers, cappers, and labelers or just a single unit. We're only too glad to give you in detail our tested knowledge on how to prolong the life and increase the operating efficiency of your Pneumatic machines—through specialized lubrication. For complete information on proper lubricants to use on your bottling equipment, consult your machine supplier.

PNEUMATIC SCALE CORPORATION, LTD.

71 Newport Avenue, North Quincy, Mass.

Branch Offices:

NEW YORK • CHICAGO • SAN FRANCISCO • LOS ANGELES

★ PNEUMATIC
SCALE CORPORATION, LTD.
PACKAGING & BOTTLING EQUIPMENT

WASHINGTON REVIEW

Summary of current restrictions and limitation orders

● **"Concentration" next step**—In quick succession industry has experienced priorities, allocations, conversion, PRP. Now all businesses should be in readiness for "concentration" plan. This is already in effect in some degree, notably in the type-writer field, where plants with large production facilities are to be reserved for war work and smaller plants permitted to continue civilian production. Steps appear to be taken slowly, in order to avoid shocks and dislocations. Donald Nelson says no hard-and-fast rules can be laid down, but the principles on which they are operating appear to be taking full advantage of British experience along similar lines. Application of the plan, it is anticipated by WPB, should render assistance to a part of the industrial economy which has been unable to find a place in the war effort.

● **Army Saves Cargo Space**—The War Department announces that thousands of cubic feet of valuable cargo space will be saved in shipments of foods overseas by packing army "G.I." cans with dry foods like flour, sugar and rice. One 32-gal. can, for example, will hold 200 lbs. of produce.

● **Fibre Boxes to be Overpacked**—Containers Branch of WPB because of army complaints from overseas states that the Quartermaster Corps has directed all Depots not to ship any items overseas in corrugated or solid fibre boxes, unless those boxes are overpacked in nailed wood or wirebound wood boxes. Emergency C, D and K rations are to be overpacked in nailed wood boxes. Contractors are expected to make deliveries of all Quartermaster supplies in containers as specified in Awards. Provisions of Order M-86a have not been changed. Items delivered to the Quartermaster Corps in fibre will be overpacked in wood at army Depots.

● **Bidders' Reference Book**—The Quartermaster General's Office announces a new reference book for bidders which will save time and paper work for contractors interested in government orders. Past practices, obviously, have involved circuitous procedures. The new reference book cuts the Gordian knot of red tape and simplifies procedure. Bidders may obtain copies from Quartermaster Procuring Depots.

● **Collapsible Tube Committee**—Meeting with the Food and Drug Administration, Packaging Institute's Committee (William T. Eagan, William M. Bristol and Joel Y. Lund) discussed problem of lead absorption into toothpaste and shaving cream from the new types of collapsible tubes

made with lighter tin coating. Six months' tests have been made by various members of the committee, which were reported to F.D.A. Previous results were based on 10 per cent tin content, whereas prospect is for reduction to 5 per cent on toothpaste and 1½ per cent on shaving cream. Experience is lacking on these lighter coated tubes to give definite results. Dr. Dunbar of F.D.A. is of opinion that shaving cream presents little lead poisoning hazard. F.D.A.'s primary interest is in the overall lead intake into the body from all sources. Light coated tubes are a necessary emergency measure of probably only a few years duration, hence F.D.A.'s attitude is different than if this type of tube were to be permanent.

● **Inadequate Yield of Tin from Tube-for-Tube Exchange Plan**—WPB's Conservation Division Deputy Director states the exchange plan is netting 40 tons per month of critical metal, compared with annual goal of 1,200 tons. Tin Salvage Institute estimates consumption of 600 tons per month for first quarter of 1942. This consumption, they say, should produce bigger salvage tonnage.

● **Cellophane**—L-20 was amended July 22 to permit window cartons for food products.

● **Copper**—M-9 was amended July 29 by addition of number of items to "Military Exemption list" in which copper is not limited when ordered by government agencies. Also amended August 1 to place all deliveries of copper under complete allocation control by Director General. Also amended August 3 to transfer allocation control.

● **Iron and Steel**—Prospect of a considerable expansion of the steel ingot capacity for the United States is in sight as a result of the recommendation, July 24, by WPB's Iron and Steel Branch which would increase the present capacity of 88,569,970 tons to 98,279,970 tons by mid-1943. The report says that definite steel requirements for the entire war program have always been difficult to obtain. Obviously, however, the war program will absorb all possible expansion. Our conclusion, unavoidably, is present restrictions for packaging purposes will at least remain in force if not become more stringent.

● **Silver**—M-199, July 29, restricts civilian use of foreign silver after October 1 except on A-3 or better ratings for many articles including closures for containers.

● **Lead**—Order M-38J, governing monthly lead pool, was revoked August 3 because current lead production is in excess of the demand.

● **Zinc**—Order M-11b, July 24, further restricts use of zinc. Accompanying the order is a complete list of prohibited articles which must not be manufactured after September 1.

● **Soda Ash**—Users of this important glass ingredient will be permitted unlimited storage by the August 3 action of WPB's Director General for Operations. This will allow building up current inventories against future demand.

● **Rubber**—Order M-15 has now been amended: July 31 to restrict use of rubber cements and adhesives in a specific list of articles.

M-119 amended August 5 to prohibit use of rubber sealed closures except those manufactured by April 19. The amendment also unfreezes stocks of closures which cannot be used for the packing of permitted products because of printing which would result in misbranding, or because of special design.

● **Synthetic Rubber**—The WPB July 27 approved an increase in its synthetic rubber program from 800,000 to 870,000 tons.

● **Shellac**—M-106 was amended July 31 to place all shellac except for control.

● **Paper**—Many types of packaging papers, by OPA action July 31, were placed under provisions of Maximum Price Regulation No. 129. Included are waxed paper, envelopes, paper containers, liquid tight containers, sanitary closures, etc.

● **Printing and Publishing**—Branch Chief Geo. A. Renard July 20 announced formation of new section headed by Herbert W. Blomquist to handle all printing and publishing machinery.

Order M-99 August 5 paves way for war use of critical metals tied up in obsolete printing plates. Time limits are set for obsolescence; age limit for container printing plates is four years. New metal not available unless printers and publishers certify that they do not possess any obsolete plates. Following issuance of this order Chief Renard called upon printing and publishing industry to contribute scrap materials "to the last ounce."

● **Canning Plants**—July 29 amendment to P-115 assigns same preference ratings as canners have for maintenance and expansion of plants to persons engaged in freezing, dehydrating or fresh packing of fruits and vegetables.

● **Tin and Terneplate**—Supplementary Order M-81b, July 23, prohibits use, sale or manufacture of lubricating oil cans made of any metal after September 30.

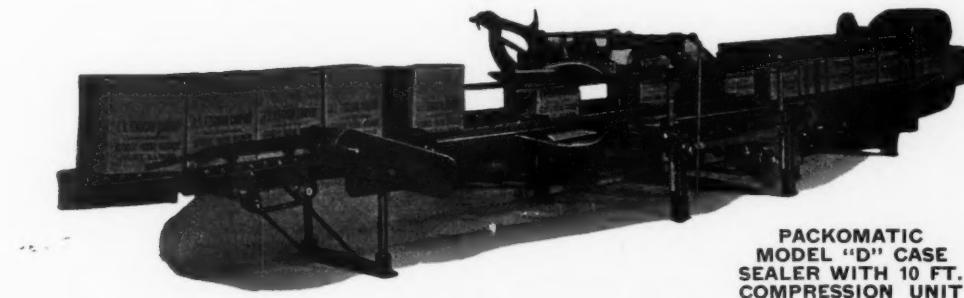
PRODUCTION FOR VICTORY

THE PACKOMATIC WAY

Modern Machines and modern production methods, plus the American way of doing things are quickly gearing our country to an efficient wartime economy basis.

If you have a production problem, particularly if it has to do with our present war effort, you are invited to take advantage of our vast experience with packaging and production problems of all kinds.

In hundreds of plants throughout the country PACKOMATIC equipment is helping to supply the increased demand for fast production of essential goods, also helping to supply the thousands of cases of materials for our armed forces, our allies, and the civilian population.



PACKOMATIC
MODEL "D" CASE
SEALER WITH 10 FT.
COMPRESSION UNIT

PACKOMATIC Case Sealers are automatically applying adhesive, folding, sealing and compressing millions of cases of products every year. These machines are furnished for automatic top and bottom sealing, or for top, or bottom, sealing only. Available in portable or stationary models, adjustable for all case sizes. Will handle non-tested or regular corrugated or solid fibre shipping containers, at any speed required, without an operator.

* Other Four Star PACKOMATIC Machines *

Consecutive Numbering Device
Carton Making Machines
Carton Sealing Machines
Paper Can Tube Gluers

Automatic Net Weight Scales
Automatic Volumetric Fillers
Can Labeling Machines
Paper Can Set-Up Conveyors

Automatic Boxing Machines
Paper Can Shrinkage Machines
Paper Can Tube Cutters
Auger Packers-Dating Devices

"BUY MORE WAR BONDS AND STAMPS"

PACKOMATIC

PACKAGING MACHINERY

J. L. FERGUSON COMPANY, JOLIET, ILLINOIS

REPRESENTED IN ALL PRINCIPAL CITIES

U. S. patent digest

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 10 cents each.

TEA OR COFFEE BAG. W. S. Cleaves (to Pneumatic Scale Corp., Quincy, Mass.) U. S. 2,291,278, July 28. A bag for submerging in liquid to prepare a beverage by infusion, comprising a bag having a mouth portion formed by gathering the free edges of bag-forming material, a beverage base within the bag and a handle for the bag adapted to envelop said mouth portion for a closure therefor.

COSMETIC CREAM CONTAINER. G. F. D'Alelio (to General Electric Co., New York, N. Y.). U. S. 2,291,379, July 28. A cosmetic cream container in which at least the inner surface that contacts the cosmetic cream packaged therein comprises an aminotriazine-aldehyde condensation product in an insoluble, infusible state.

CONTAINER. A. J. Chamberlain, Milwaukee, Wis. U. S. 2,290,536, July 21. A container comprising a body portion of fibrous material, a reinforcing metal sleeve structure surrounding the lower end of said body and terminating in an inturned roll embedded in the lower end portion of the fibrous body.

FROZEN VEGETABLE BOX. J. Henchert (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,289,193, July 7. A container comprising a rectangular body shell and end closures, each end closure being attached at an end of the shell by a seam structure offset inwardly from the external face of the shell a distance sufficient to render the container devoid of outward projections.

CONTAINER. C. C. Conway, Jr., and E. E. Baker (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,289,178, July 7. A combined storage and display container, comprising a body portion having parallel sides, a cover for closing when used for shipment and retainer for partially closing when used for display.

CARTON. F. W. Broderick (to Reynolds Metals Co., Richmond, Va.). U. S. 2,289,236, July 7. An elongated carton formed of a flat foldable one-piece blank with top member and overlapping bottom members, each of which is substantially equal in size and which overlap one over the other for entire area.

PAPER ROLL. A. T. Lewis and H. A. O'Connell, Toronto, Ontario, Canada. U. S. 2,289,660, July 14. Combination with a roll of paper and elongated paper tab

having an enlarged inner end of the same width as the roll, said inner end of tab being adhesively secured to the under face of end of roll.

DISPLAY CARTON. J. T. Crandall (to Ashaway Line & Twine Mfg., Ashaway, Rhode Island). U. S. 2,290,095, July 14. A shipping and display container with base and cover being of rectangular box form with greater length than width.

PACKAGING. A. D. Larson (to A. Stein & Co., Chicago, Ill.). U. S. 2,290,104, July 14. A package comprising a tray and a band adapted to encircle a portion of the tray and merchandise positioned over tray portion.

PASTEBOARD FLOOR-DISPLAY STAND. M. Katz (to Consolidated Mounting & Finishing Co., New York, N. Y.). U. S. 2,290,144, July 14. A pasteboard floor display stand including a body comprising a rigid back piece and a front piece secured to the back piece, said front piece comprising a plurality of sections defined by scores whereby the front piece is collapsible toward the rear piece.

DISPLAY CARTON. C. E. Fussner, Cleveland, Ohio. U. S. 2,290,681, July 21. A one-piece foldable blank to form display carton having spaced parallel fold lines defining a plurality of panels and forming therewith the sidewalls of a receptacle member when folded into position.

DISPLAY BOX. M. Weill (to Arrow Manufacturing Co., Hoboken, N. J.). U. S. 2,290,721, July 21. A display container comprising a central assembly and hollow pieces, the central assembly in turn comprising a body member and an arched cover member.

INK DISPENSER. K. Reinecke, Brooklyn, N. Y. U. S. 2,286,646, June 16. An improved ink dispensing device used in combination with ordinary ink bottles for providing an ink level which can be reached when ink level in bottle has sunk beyond ordinary reach.

SHEET METAL CONTAINER. W. W. Hodgson (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,289,424, July 14. A container with a body portion having around one end thereof an integral reinforcing band consisting of a plurality of layers formed integral with one another and with the body portion.

SHEET METAL CONTAINER. W. W. Hodgson (to Continental Can Co., Inc., New York, N. Y.). U. S. 2,289,782, July 14. A container whose body portion has an integral reinforcing band consisting of a plurality of integral folded layers around the upper end thereof.

ENVELOPE MANUFACTURE. W. H. Hatton, Gardner, Mass. U. S. 2,289,118, July 7. An envelope consisting of a thick smooth back wall piece trimmed to lie within and adjacent to the maximum boundaries of the envelope.

PACKAGING MEANS. S. H. Berch, Beverly Hills, Calif. U. S. 2,288,603, July 7. A packaging device in which bag-like flexible containers, having closed sides and end, are shaped, filled and sealed.

LABELING MACHINE. J. M. Brown (to New Jersey Machine Corp., Hoboken, N. J.). U. S. 2,289,237, July 7. A labeling machine having mechanism to supply gummed labels to a given point on a support for a container with label pressing element movable in a flat plane to and from said point.

MACHINE FOR OPENING SHIPPING CASES FROM THE FLAT. E. Ardell (to Standard-Knapp Corp., Long Island City, N. Y.). U. S. 2,289,820, July 14. A machine for opening shipping cases from the flat, magazine for holding collapsed cases, reciprocating feeding means for feeding the cases one at a time to opening station and reciprocating delivering means operating for advancing squared-up cases to a delivery station.

BATTERY PASTING MACHINE. A. Mayer, Detroit, Mich. U. S. 2,290,288, July 21. In a pasting machine, a hopper, a roller adapted to engage paste in said hopper by means for feeding grids in a path tangential to said roller.

METHOD OF MAKING PERFORATE LATEX RUBBER FILMS WITH OR WITHOUT TEXTILE. M. C. Teague and P. L. Mahoney (to United States Rubber Co., New York, N. Y.). U. S. 2,289,141, July 7. Method of making a perforated latex rubber film comprising the steps of applying a substantially uncoagulated coating of latex to a deposition backing.

TONGUE AND SLOT CONNECTION BETWEEN SHEET MATERIAL MEMBERS. E. M. Brogden (to Manhattan Co., New York, N. Y.). U. S. 2,289,824, July 14. A handle connection construction for containers, the combination, with a container body formed of stiff flexible sheet material provided with a slotted zone, of a handle member formed of a similar material and capable of longitudinal movement relative to container between carrying and collapsed states.

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PRINTING
QUALITIES
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PAPER

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ONE of the NEW
BRIGHTWOOD
PROTECTIVE
PAPERS

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1. **Moisture Vapor Permeability:** 0.265 grams per 100 sq. in. per 24 hours, in comparison with No. 300 cellulose film 1.00 gram per 100 sq. in. per 24 hours.

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2. **Water and Oil Proofness:** Grease, vaseline, mineral oil, water—no penetration in 24 hrs. ALONE!

This means a minimum of 10 percent more money invested in War Bonds in every plant, office, firm, and factory in the land.

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4. **Heat Sealing:** Best and quickest way to raise this money—and at the same time to "break" inflation—is by stepping up the Pay-Roll War Savings Plan, having every

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We have prepared a Reference File Folder which you can have by using the coupon at the right. This folder contains samples and complete information on all **BRIGHTWOOD PROTECTIVE PAPERS** to date and provides space for filing additional samples as new developments are released. By the time this advertisement appears, our sample folder will include **BRITE-PAK No. 22**.

U. S. War Savings Bonds

Write today for this new folder

This space is a contribution to America's all-out war

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295 Madison Ave., New York 2635 So. Wabash, Chicago

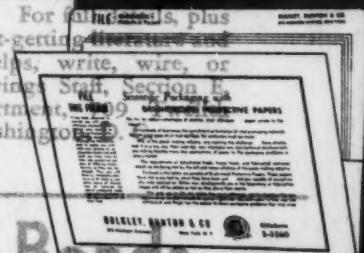
Agents for **HOLYoke CARD & PAPER CO.**
SPRINGFIELD, MASSACHUSETTS

WATERPROOF

GREASEPROOF

NON-TOXIC

HEAT SEALING



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295 Madison Ave., New York, N.Y.
Kindly send us your latest file folder on Protective Papers.

DECEMBER 1942

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96 MODERN PAGE

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concern with packaging materials. Copies of pat-

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S. N. Y., U.S. 2,280,
A cigarette whose body portion
is integral reinforcing band consisting

Wife ready for this new father

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115
SOUTHERN 10.
HOLYOKE CARD & PAPER CO.
203-25 Wabash Avenue, Chicago,
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TO WIN THIS WAR, more and more billions are needed and needed fast—AT LEAST A BILLION DOLLARS A MONTH IN WAR BOND SALES ALONE!

This means a *minimum* of 10 percent of the gross pay roll invested in War Bonds in every plant, office, firm, and factory in the land.

Best and quickest way to raise this money—and at the same time to "brake" inflation—is by stepping up the Pay-Roll War Savings Plan, having every company offer every worker the chance to buy MORE BONDS.

Truly, in this War of Survival, VICTORY BEGINS AT THE PAY WINDOW.

If your firm has already installed the

Pay-Roll War Savings Plan, *now is the time*—

1. To secure wider employee participation.
2. To encourage employees to increase the amount of their allotments for Bonds, to an average of at least 10 percent of earnings—because "token" payments will not win this war any more than "token" resistance will keep the enemy from our shores, our homes.

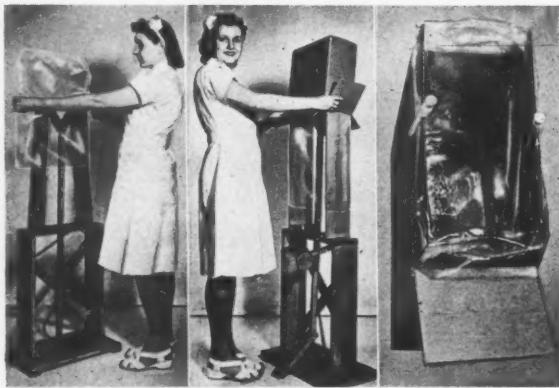
If your firm has not already installed the Pay-Roll War Savings Plan, *now is the time to do so*. For full details, plus samples of result-getting literature and promotional helps, write, wire, or phone: War Savings Staff, Section E, Treasury Department, 709 Twelfth Street NW, Washington, D. C.

U. S. War Savings Bonds

This space is a contribution to America's all-out war program by

MODERN PACKAGING

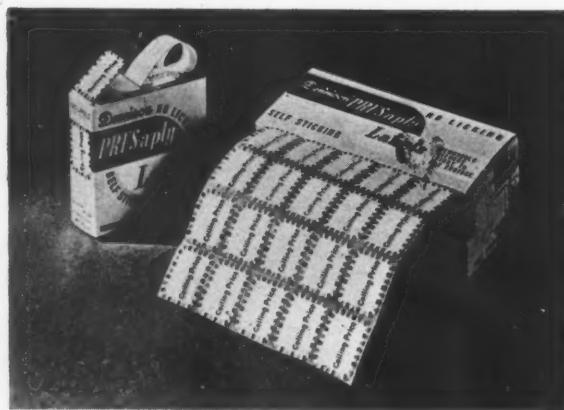
Equipment and Materials



EXPANDING MANDREL

The Engineering Research Div. of the Pack-Rite Machine Corp. announces the development of an expanding mandrel, designed to facilitate the insertion of cellophane pouch liners in large size cartons. The new mandrel will be of interest to packers of frozen and powdered eggs, powdered milk, frozen and dehydrated foods, vegetable and animal shortenings and similar products now being packed in cartons to alleviate the tin shortage.

The operator merely slips the cellophane pouch over the contracted flaps of the mandrel, depresses the self-locking foot pedal, which expands the flaps, thus holding the pouch in box-like position and giving it rigidity so that the ears can be easily folded over. Then the carton is slipped over the pouch. The knee lever is tripped which releases the flaps so that the carton with its pouch liner can be easily removed for filling.



CEILING PRICE LABELS

To speed up the necessary job of marking ceiling prices, Dennison Mfg. Co. is offering specially printed labels. The words, "Ceiling Price," are plainly printed on the lower half of the label and it is framed in a distinctive red and blue checker border for spotting quickly. The label sticks with simple finger-pressure and no licking is necessary. The labels come in handy dispenser boxes and can be filled in with pen or pencil. For constant use there is a metal dispenser holder that grips a desk or counter with suction feet. Multiple width rolls are available for large-scale labeling operations and these can be readily filled in on the typewriter. Labels adhere to almost all smooth surfaces.

INK CHART

The rapid growth of color photography has led to the need for better standards of reproduction in lithography. To meet this need, The Fuchs & Lang Mfg. Co., Div. General Printing Ink Corp., has issued a chart of lithographic process inks for the reproduction of Kodachrome and other direct color processes.

PAPER COATING

Protective Coatings, Inc., reports that the company has developed a product which may be used successfully as a coating for vinegar containers, thus making possible the packaging of this food in a paper container. The coating may also be used, the company states, for packages which are to carry oil products.

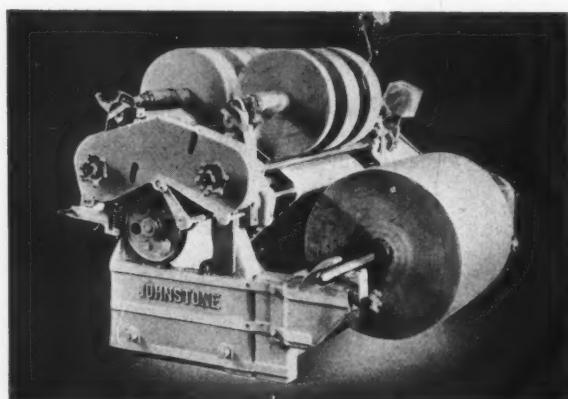
RIP-CORD BAG CLOSURE

A new method for closing cotton and burlap bags which provides a simple, quick means of opening them without injury to the bag has been developed by Bemis Bro. Bag Co. A rip-cord is sewn into the closure of the bag with a regular two-thread bag closing machine. Only minor inexpensive adjustments are necessary to adapt the machine to sewing the rip-cord. A quick jerk of the rip-cord opens the bag instantly and the bag is not torn or damaged and valuable time has been saved. By pulling the rip-cord part way across the bag, the closure provides a useful pouring spout when only a part of the contents of the bag is to be removed at a time.

Ten rip-cord closed bags can be piled on a hand truck, the company states, whereas only eight tied top bags can be loaded on the same size truck, thus saving by 20 per cent the number of trips to and from warehouse and freight car.

COMBINATION WINDER AND SLITTER

A new machine that slits and rewinds materials which vary in thickness such as waxed or coated papers, varnished cambrics and similar materials is announced by Johnstone Engineering & Machine Co. Rolls on one shaft may be of slightly different diameter than the rolls on the other shaft, without any sacrifice in roll density or firmness. Double rewinding assures positive separation of rolls when handling uncured or semi-cured rubber, rubberized fabrics or other materials which, if rewound side by side, would immediately "re-seal" to the adjacent roll or strip. Standard size machines take rolls 32 in., 42 in., 52 in. and 62 in. wide. Speeds depend on the material handled and the width of the roll, maximum being 450 ft. per minute.

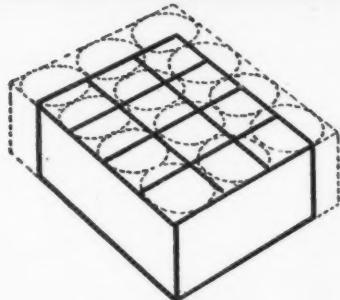


KEEP THE GOOD IN...

AROMA
FLAVOR
FRESHNESS
MOISTURE
GREASE
SHAPE



KEEP THE BAD OUT



SAVE SPACE!

Rectangular cartons save $\frac{1}{2}$ the space in shipping and storage...It's the practical shape for modern conditions.

In every way packaging is reaching into new fields—seeking substitutes, speeding production, making the most of non-critical materials. It's in this effort that Ridgelo research is bringing new products to folding cartons, old packages in to new protective designs.

Ridgelo materials include grease resistant coatings—water protective finishes, laminations using papers, parchment, glassines and cellophane for moisture-vapor resistance and grease protection.

Perhaps your problem fits our broadened production facilities. Let's get together and find out.

Ridgelo
CLAY COATED

BOXBOARDS • CARDBOARDS

MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY

Representatives: E. C. Collins, Baltimore • Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Son, Inc., Philadelphia

Plants and People



Construction of National Can Corp.'s new Chicago plant has recently been completed. Latest link in National Can's expanding chain of modern manufacturing plants, the new unit has been supplying cannerys with sanitary cans for more than 60 days. The plant is located in Chicago's "clearing district" at 6000 West 51st St. It is removed from local traffic centers, but is strategically accessible to all the main highways and railroads which serve the nation's great food-growing region.

Joseph K. Close, who has been closely associated with the advertising work of Owens-Illinois Glass Co. for the past several years, has joined the company as manager of its newly created Division of Market Research. Announcement of Mr. Close's appointment to his new position was made by Faustin J. Solon, vice-president of Owens-Illinois. Mr. Close was an account executive on the Owens-Illinois advertising program when he formerly was associated with the United States Advertising Corp.



Joseph K. Close

Thomas W. Koch, well known in the packaging field, has just joined Milprint, Inc., in a sales capacity.

A joint experiment by local industrialists and educators, involving "sub-contracting" of war production work by the Springfield Technical High School, has been successfully completed and indicates a huge reservoir of "production soldiers" is available in many high schools throughout the country. The unique experiment, carried out by the Package Machinery Co. and the school, utilized the machine shop craftsmanship of 15 boy students. In the course of their regular class work, the boys produced 70 essential machine parts for the local war plant.

Reynolds Metals Co., announces the appointment of James Cage as manager of their Cheese and Dairy Products Division with headquarters at 155 East 44th St., New York City. Mr. Cage has had more than 20 years' experience in adapting packaging materials to dairy products.

Container Corp. of America announces the following organizational changes: J. V. Spachner, a vice-president of the company, becomes head of the Western Container Division with offices in Chicago. He will continue, however, to supervise the operation and sales of the Fernandina pulp mill as well as all pulp buying for the corporation. Arthur U. Claghorn, vice-president of Pioneer Paper Stock Co., is promoted to the office of president of that company. E. I. Orr becomes vice-president of Pioneer Paper Stock Co. and continues in charge of its Eastern Division. Arthur J. Furth, secretary of Pioneer Paper Stock Co., becomes vice-president and H. C. Pearson becomes secretary of that company and continues in charge of the Michigan Division.

Oliver H. Clapp has resigned as an assistant vice-president of Stein-Hall & Co., Inc., to become associated with the Defense Supplies Corp., Washington. Mr. Clapp had been in charge of the Burlap Division of Stein-Hall's Foreign Department. The management and supervision of the company's Burlap Division are now integrated in the Foreign Department under Cecil H. Coryat and Robert M. Stein.

William O. Crabtree, until recently head of War Production Board in New York City, has joined the Package & Container Corp., New York City, as vice-president. Prior to his work on the WPB, Mr. Crabtree was president of the Crabtree Refrigeration Corp. of Long Island City.

R. J. Lowe, controller of the F. N. Burt Co., Inc., has been elected president of the Buffalo Control and G. Donald McCathron, secretary of the E. E. Fairchild Corp., has been re-elected secretary of the Rochester Control of the Controllers Institute of America.

Leonard B. McClintock, former general manager of the General Tire Co., Buffalo, N. Y., has assumed the same post with the



L. B. McClintock

Wright Automatic Machinery Co., Durham, N. C. Mr. McClintock, well known in the tire field, served the Firestone Tire and Rubber Co. for 20 years. He was manager of the Fisk Rubber Co. prior to that connection. For many years the Wright company has specialized in the manufacture of packing machinery for the tobacco manufacturers, but for the past several years it has expanded operations to embrace additional lines in the packaging field and at present the company is engaged in war work.

Thomas J. Beirne, formerly of National Can Corp., has resigned as Chief, Can Section, Containers Branch of the War Production Board in Washington. He has returned to National Can and will make his headquarters in Chicago.



R. H. Ritchie

R. H. Ritchie, chairman of the Board of Directors of W. C. Ritchie and Co., Chicago, died July 31 at St. Luke's Hospital. He was born in Chicago 69 years ago. Mr. Ritchie had been affiliated with the company founded by his father for 50 years, serving as president or chairman for the last 25 years. Until the latter part of 1940, when illness made it necessary to drop his active interest in business affairs,

Mr. Ritchie had also served as a member of the advisory board of Liberty Mutual Insurance Co. For the last year, active management of the Ritchie company has been in the hands of J. H. Cromes, president of the company since February.

Ernst Lauckhardt, vice-president of Trautmann, Bailey & Blampey, died July 10. He was with the company since 1888.

OBITUARY



IT'S TIME TO LOOK INTO THIS SHEETING BUSINESS

War jobs call for careful choice of Plastic Materials

PROBLEMS facing package fabricators in normal times are the very same problems that must be solved by war industries in the selection of plastic sheetings. The right plastic for the right job—the transparent sheeting with the proper qualifications—that's the all-important question. The determining answer lies in the basic make-up of the plastic itself.

In the case of ETHOCEL* SHEETING,

now playing an outstanding role in the production of certain war equipment, manufacturers base their choice on several significant factors:

1. ETHOCEL SHEETING is made of Ethyl-cellulose—the toughest cellulose material commercially available.
2. Even at 50° below zero it retains its characteristic toughness as well as its extraordinary flexibility.

3. ETHOCEL SHEETING possesses high ductility and exceptional stability to heat.
4. It has a high softening point—300° F.

These are some of the qualities that make ETHOCEL SHEETING a preferred sheeting material wherever service requirements are unusually severe. They are worth the careful consideration of every manufacturer of war materials.

HOW ETHOCEL SHEETING MEETS WAR-TIME NEEDS

- **Low Temperature Flexibility.** Flexible at -70° F. Toughest cellulose material commercially available.
- **Excellent Ductility.** Draws, where depth is equal to diameter, are easy to obtain. Material remains flexible after drawing.
- **Heat Resistance.** Softening Point, 300° F. Melting Point, 375° F.
- **Slow Burning Rate.** Certified by Underwriters' Laboratory.
- **Good Tensile Strength.** 10,000 lbs. per sq. inch.
- **Excellent Electrical Insulator.** Dielectric strength 3,000 volts per mil. (A. S. T. M. short time test 2,500 volts per second.)
- **Light Stability.** Fadeometer resistance more than 600 hours without embrittlement or discoloration.

*Trade Mark Reg. U. S. Pat. Off.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN
New York, St. Louis, Chicago, San Francisco, Los Angeles, Seattle, Houston

Ethocel Sheeting

DOW ETHYLCELLULOSE



For Your Information

Fully aware of the new responsibilities which paper must assume currently, the Technical Assn. of the Pulp and Paper Industry will convene in Boston at the Statler Hotel, Sept. 29 to Oct. 1, all set to discuss and act for the maximum benefit of the war program. Plans for the meeting include the preparation of an exhibit showing the situation of paper and cellulose products for metals which have been developed to meet wartime and new civilian requirements.

Participating in this exhibit will be the Subsistence Research Laboratories of the U. S. Quartermaster Corps which will exhibit new paper ration packages. It is planned to open the entire exhibit to the public, to demonstrate the effect of the war on the packaging of many products. It is anticipated that more than 1000 items will be exhibited.

Unusual feature of this exhibit will be the fact that no charge will be made for exhibit space. Any producer or fabricator of paper product may have the privilege of exhibiting without payment of fee provided only the products exhibited show new uses for paper of package changes that have been made to substitute paper for metals, thus aiding the war effort. Application for space should be made to R. G. MacDonald, secretary, TAPPI, Chanin Bldg., New York City.

The discussions of the first day will be devoted entirely to packaging. Program of this first day follows:

Tuesday, Sept. 29

10:00 A. M. Wartime Packaging Session—Chairmen—Arno W.

Nickerson and J. D. Malcolmson

1. Opening Remarks—R. A. Hayward, President, TAPPI
2. "Paper Has Some New Packaging Jobs," C. W. Browne, Editor, Modern Packaging
3. Protective Coatings for Containers and Wraps (Speaker to be announced)
4. "Packaging of Dehydrated Foods," Charles Watson, III, Dry-Pack Corp.

2:00 P. M. Wartime Packaging Session—Chairmen—Arno W. Nickerson and J. D. Malcolmson

1. "Ration Container Problems," Capt. Robert R. Nelson, U. S. Quartermaster Corps
2. "Folding Cartons & Fibreboard Containers as Substitutes for Metal Containers," J. D. Malcolmson, Robert Gair Co.
3. "Replacement of Metal Containers by the Use of Cellulose Sheeting," J. D. Rankin, E. I. du Pont de Nemours & Co.
4. "An Engineering Approach to the Solution of Packaging Problems Involving M.V.T. Resistance," J. F. Halladay, American Coating Mills
5. "The Use of Urea-Formaldehyde Resins for the Water-proofing of Starch Used in the Production of Solid Fibre and Corrugating Board," Philip B. Taft, The Resinous Products and Chemical Co.

Complete fall season catalog of window display materials together with a folder illustrating patriotic decorative materials for victory displays has just been released by Greggory, Inc. Copy may be obtained by writing them at 2929 S. Wabash, Chicago.

For months the Army has been seeking a substitute for tin and other critical metals as a packaging material for overseas shipments of dehydrated foods. This research, according to the War Department, has now been completed at the Quartermaster Corps Subsistence Laboratory in Chicago with the development of a new "3-in-1" package which is moisture-proof and offers protection against insects. In addition, it can be submerged in salt water for several hours without damage to the contents. While

the container, which holds 5 gallons, was designed primarily for shipping white potatoes, sweet potatoes, beets and yellow turnips, it has performed so well under rigid service tests that it shows promise for packaging other dehydrated products.

The new system utilizes specially treated paper, fibre and wood. The only metals needed are relatively small amounts of lead and steel wire. Feature of the "3-in-1" system is the widespread use of laminated paper, that is, two or more sheets of paper and lead foil fastened together with adhesive coatings which makes them waterproof. Several laminating agents, notably asphalt and wax, have proved to be acceptable.

Contractors supplying dehydrated white and sweet potatoes, beets and yellow turnips to the Quartermaster Corps are being informed of the new packaging requirements. However, they are permitted to use metal containers until such time as the new packages become available or until present stocks of metal cans in their possession are exhausted.

A non-technical discussion of the manufacture of plastics from the raw materials to the finished products has recently been issued by Durez Plastics & Chemicals, Inc., Walck Road, North Tonawanda, N. Y. This eight-page booklet illustrates and describes the manufacturing process, compression molding and uses of phenolic plastics and resins in a very easy-to-read style. It contains a brief review of recent books and suggests sources for further comprehensive study of the subject.

Handbook of Technical Information on Koroseal, a plasticized polyvinyl chloride described as a synthetic resin, Section I, has just been released by The B. F. Goodrich Co., which developed the product. The volume is available on request. This first section of the handbook tells the nature and chemistry of Koroseal, physical properties, plasticizers, stabilizers and pigments used in compounds, together with mixing and processing procedures. Of especial value are six charts, a manufacturing flow diagram, specific viscosity vs. physical properties, effect of quantity of plasticizer, electrical effects of aging, differences in plasticizers and physical effects of various pigments, etc.

In order to assist department stores in streamlining their wrapping and delivery program for the conservation of wartime materials, the Equitable Paper Bag Co., Long Island City, N. Y., has compiled a 12-page booklet entitled, "Wrapping for Victory." The booklet suggests methods of increasing the number of customer "take withs" to cut delivery costs. It also points to savings of 25 to 50 per cent by the proper use of wrapping materials. In order to guide stores in using the most conservative size paper bag, it contains a check list of proper bag sizes for various types of retail merchandise.

As a result of reports about traveling difficulties, travel priorities and shortages in hotel accommodations, members of the American Management Assn. will be interested to know that the Assn. contemplates no curtailment of its regular conference schedule for the fall. This decision has been reached following discussion among the Assns.' officers and consultations with the Office of Defense Transportation, hotels in key cities and railroad companies. The AMA has been given the green light by the ODT to proceed with its regular divisional conferences and has found in checking with railroads and hotels that traveling facilities and hotel accommodations will be in general available. The fact that AMA meetings are devoted almost entirely to managerial problems of war production and not to entertainment purposes, places them in a category of meetings of which the ODT approves.



HE ALSO SERVES WHO COOPERATES

One of our most powerful weapons for war is the will to sacrifice personal interests to the greater interest of America. Not all of us can serve in the armed forces. Neither can every manufacturing plant be converted wholly to war production. Yet each of us can make a worth-while contribution to Victory by cooperating fully with the war effort within his own sphere.

In addition to devoting a large part of our production facilities to the manufacture of war materials, Crown is constantly endeavoring to find new ways to use available materials more efficiently and economically. We are maintaining the quality of Crown Closures within the limits of Government sanction. The skill and experience of our entire research organization is also at the disposal of our customers in finding the best possible answers to present-day sealing problems.

You, in turn, can aid these efforts in the following ways:
First: By using only the smallest closure practical for your purpose. *Second:* By adopting liners and coatings which do not contain materials essential to war production.

CROWN CORK AND SEAL CO., BALTIMORE, MD.
World's Largest Makers of Closures for Glass Containers

For the Last Word in Closures ...

COME TO CROWN FIRST!



CROWN'S WARTIME POLICY: To supply closures, containers and services for packaging foods, beverages, chemicals, etc., needed by civilians and the armed forces. To build an ever-increasing volume of vitally needed weapons of war for our fighting men.

Mile long beer line

(Continued from page 86) the building front, which accommodate the very large trucks, such as those used by distributors. Or the flow may be diverted to another portion of the first floor normally used for city deliveries. Here the quota of fulls is diverted by means of crosswise conveyors to the west side of the building to feed trucks handling city deliveries. As on the second floor, fulls can be distributed to various places for temporary storage. Here, too, the operations are controlled from an observation office equipped with a loud speaker system.

Quick interchangeability from unloading of empties to loading of fulls on the same truck is another feature of the conveyor system's flexible operation. After the empties are unloaded, it is a matter of seconds only before coupling-up can be done with conveyors feeding the third and fourth floors used for storage of empties. The operation consists simply of connecting up with any one of four conveyor lines by means of stevedore-type couplers which reach right into the waiting truck. The four conveyors used for empties travel in two lines directly to the third floor, which is used for storage and for sorting.

Reaching the third floor, the four lines converge and change speeds. Cases of empties that do not require sorting are permitted to proceed directly to a series of three conveyors which travel the length of the room, then on to the fourth floor for direct feeding to the soakers. For this operation there is need to change conveying speed. Upon reaching the third floor, the empties travel on the belt at the rate of 150 ft. a minute, but on the fourth floor, where bottles must be removed from cases, the speed is reduced to 30 ft. a minute. Change of speed is also necessary because of the necessity for converging four lines in order to feed the direct flow to the fourth floor or to a carousal-shaped sorting station. Here mixed sizes are sorted out by pushing them on to various belts which feed directly to storage areas or directly to the soakers. These operations, as in the case of handling fulls, are controlled by means of directors and hinged curves coupled directly to any portion of the conveying line.

At the point where empty bottles are fed to the soakers, there is a new conveyor application for disposal of used cartons. These are placed on an overhead refuse belt, from which they are fed to a new press and baler, located on the ground floor. This machine is so huge that the hydraulic ram, used to compress three to four bales of waste matter an hour, each bale weighing about 1200 lbs., reaches up to the fourth floor. From the standpoint of wartime conservation of wastepaper, this installation is of particularly timely interest.

Another innovation is the special type of conveyor for feeding new cartons to the bottling lines. Ordinarily this material would have to be trucked from the first floor receiving platform to the bottling room. By means of a pusher bar elevator, a bundle of 10 empty cartons can be catapulted the entire distance in a few seconds without manual effort. The elevator, propelled by double strand chains and operated by automatic electric control, carries loads at an angle of 60 deg. through openings in floors on up to the bottling lines.

An idea of the size, efficiency and flexibility of the conveyor operation is perhaps best indicated by the fact that no less than 310 motors are used. On long lines, carrying extensive loads, motive power is furnished by 3-hp. motors. On others, such as cross conveyors for distributing fulls to

storage bay areas on the second floor, use is made of 1½-hp. motors. Where loads are diverted to declines for feeding trucks in the shipping area, motors of only ½-hp. are found sufficient. One of the noteworthy features of the bottling house layout is the extensive use of gravity conveyors requiring no motive power. Their use was made possible by locating bottling lines on the top floor.

Throughout the building there are also 620 light outlets and 102 plugs, all of which add to the flexible operation. No less than 425 fluorescent lighting units are used to illuminate the five floors. Cases of beer, coming off the bottling lines and then off the conveyors to the second floor storage and truck bays on the first floor, are counted automatically by photoelectric cells built into the lowermost conveyor sections.

Localized push-button control is another feature which adds to the efficiency and flexible operation of the extensive conveyor system. Any one section can be started or stopped by local push-button control. When loading a truck with fulls, the driver momentarily stops the flow by pushing a button at end of the conveyor, then sets it in motion again. The operator at the sorting section on the third floor can stop the entire flow from various conveyors in the same manner. Not only can the flow be stopped or started with ease, but in each instance the conveyor flow can be reversed to effect the speediest and most economical distribution of the load of empties or fulls, for storage or shipment to distributors and city customers.

Credit: Conveyors by Standard Conveyor Co. Soakers and labelers by The Liquid Carbonic Corp. Case loading machines by Standard-Knapp Corp.

Super-packs for radio tubes

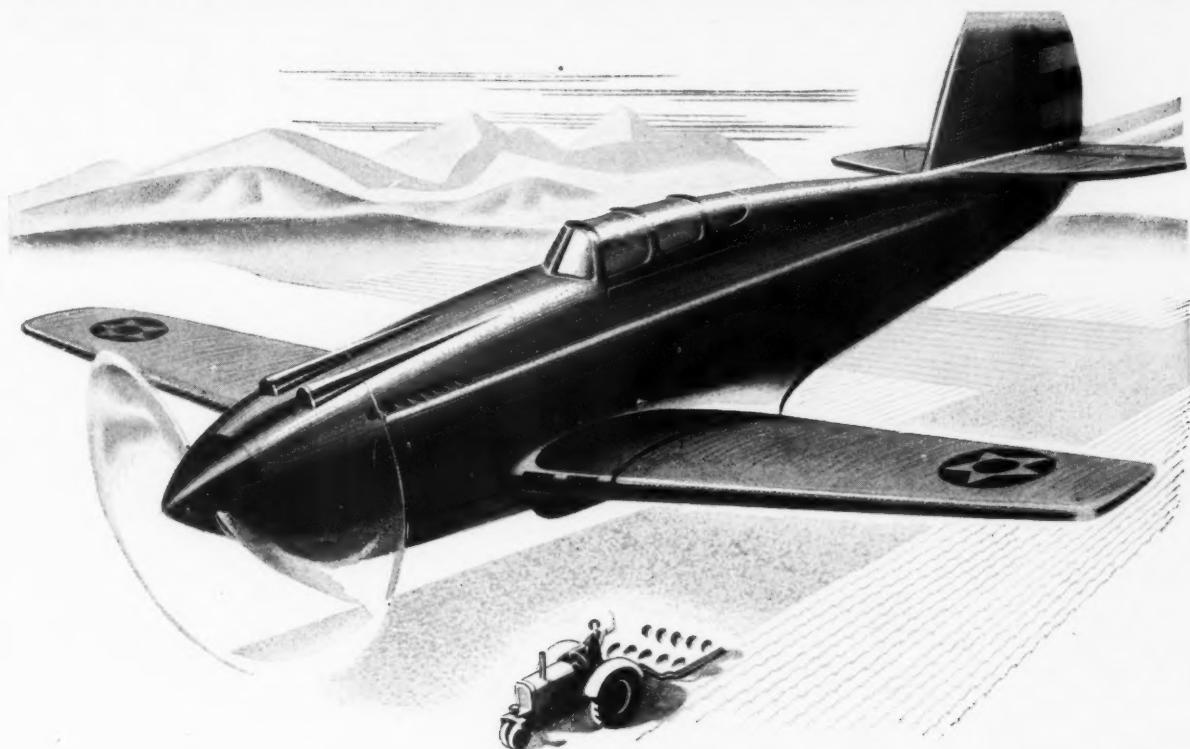
(Continued from page 67) the wadding, now allow the shredded-paper handler to do more useful work.

The case of cathode-ray tubes is interesting. These tubes are used in television and in many other types of radio equipment. They have a small socket at one end and a much larger glass area at the other. Further, they are difficult to build and easy to break. Previous practice has been to pack these tubes in shipping boxes that resembled their peculiar shape. Thus, they could not be stacked.

Under the new system, cathode-ray tubes are packed in square boxes, equipped with a removable cardboard support which looks as though it were designed by a master physicist. The tube slides into the box socket end first. As it moves into the narrowing confines of the supporting structure, it is gripped firmly but gently, held within the box and free of the ends and sides. The box may even be bounced and the tube will survive the treatment. A further economy in the case of cathode-ray tubes was effected by designing a new type of packing case for transporting the empty tubes from the glass factory in New York State to the RCA factory where the electronic elements are installed. The shipping box came into the tube factory, was unpacked and destroyed. Now the new shipping box is used to transport the tubes throughout the manufacturing process and is used for shipping the finished product. What is more, so much has been saved in the cost of the packing cases that the glass company furnishes them to RCA without cost.

The work which Elliott has done in perfecting packaging methods has been carried on under the direction of L. E. Mitchell, manager of the Industrial Engineering Department,

AH AMERICAN INSTITUTION WORKING WITH AND FOR AMERICA



Victory Cooperation from ABOVE and BELOW

Our Country's total war effort must go beyond the making of munitions—every type of vital production is involved. Foremost of behind-the-line activities is food supply and conservation. 'Tis certain both our land and its bounty must be protected from all destructive evils. Enemy invaders can be repelled, but within our borders there lurk insidious "insider" enemies of health and energy such as food spoilage and contamination. These must be thwarted by positive *packaging protection*. To this end Rhinelander Papers are weapons of war performing essential service at home and abroad in safeguarding the handling and storage of products from the Nation's fields, farms and ranches.

Folke Beecher

PRESIDENT
RHINELANDER PAPER COMPANY



FROM THE BEST THAT'S MADE TO THE CHEAPEST THAT'S GOOD

Genuine Greaseproof
Laminated Frozen Food Wrappings
Confectionery Papers
Cereal Wrapping Papers

Laminated Greaseproof Papers
Lard and Shortening Liners
Bakery Product Wraps
Coffee Bag Papers

Cracker Box Liners
Greaseproof Innerwraps
Glassine Papers, Plain, Colored
and Embossed

Wax Laminated Glassine
Opaque Label & Bag Glassine
Packing Industry Wrappings—
and Specialties to order

RHINELANDER PAPER COMPANY • MILLS AT RHINELANDER, WISCONSIN, U. S. A.

which is devoted to the development of better methods through work simplification. "The overall savings under the new method are tremendous, when considered in the light of the national emergency," Mr. Mitchell said. "In 1941 we used 400 tons of packing material. In 1942, for the same quantity of tubes, we will need only 280 tons, a saving of 120 tons. There are many other advantages. Improved efficiency has reduced the time required for tube testing by 30 per cent. This enables us to devote 30,000 additional hours of labor a year to building tubes urgently needed in radio equipment for war use."

"The fire hazard has been reduced, for there is now no shredded paper in our packing cases and no loose partitions. Our plant is being kept cleaner and neater. We don't require as much warehousing space at a time when every square foot is needed for production. We find stocks of tubes much more readily accessible."

Perhaps most ingenious of all the new packing methods is that designed for "kit" packing of tubes, used to provide in one package the several types of tubes required for factory assembly of radio equipment and the tubes needed as replacement parts. It was formerly necessary to keep a stock of all sizes of "kit" packages. Now one single box is provided for all types of kits. It is changed in size and shape by being torn the proper way along carefully designed perforated lines. Larger packing cases in which the kits are shipped are made to telescope so that they can be made larger or smaller as needed.

"All the new containers are fabricated so that they can be laid out flat," Mr. Mitchell explains. "None of them is stitched or glued. The result is that empty cartons can be stored in one-tenth the space formerly required. Furthermore, we are able to have the empty cartons returned from our customers time and time again at nominal expense, still further increasing savings in strategic materials, facilities and manpower."

Repitched barrels

(Continued from page 69) runs across the building and discharges into a ready-for-filling storage room, is removal of the old bung. This is done with an extractor machine fitted with a corkscrew-like bit which jerks out the bung. From here the barrel rolls along a short track to the load end of the pitching machine, which carries it forward with a walking-beam motion and performs automatically all subsequent operations involved in this process.

The second step is cleaning the outside. This is done by rotating the barrel swiftly on its side while water sprays and stiff brushes remove all traces of dirt. Lukewarm, soap-charged water is discharged by needle sprays over the barrel, while circular brushes revolve to present a new surface every few seconds. At the same time the interior of the barrel is partially filled with water so that the interior receives a preliminary soapless rinse. The barrel is then stopped with the bunghole down and it remains in this position as it proceeds along the walking beam.

The first four stations on the beam are provided with water spray nozzles which project into the bunghole neatly as the barrel is lowered, giving the interior a thorough high-pressure washing with hot water. Dirty water and liquefied pitch is run off in a stream to a special sewer which will not gum up carrying the sometimes viscous liquid. The next eight stations are provided with nozzles for blowing hot air inside to

evaporate the water and soften the old pitch so that it drips out of the bunghole. Finally, the barrel is clean of all old pitch and dirt—every bit of pitch lurking in cracks and interstices is melted by 800 degree temperatures enforced by the hot air blower.

After being cleaned, the barrel moves to a machine which sprays new melted pitch evenly over the entire interior with a spiral motion repeated twice in opposite directions for an even coverage. Hot air is again used to facilitate drying and to produce a uniform coating. Any surplus pitch accumulating around the bunghole is wiped away by hand and the barrel rolls immediately away to the filling room if needed at once or to the intermediate refrigerated storage room where the containers are kept until filled again with fresh beer.

Natural gas is used for all heating operations, consumption amounting to around 750 cu. ft. per hour for each heater on the three machines, each of which has the capacity of 180 barrels per hour. The output when operating on smaller barrels amounts to 240 barrels an hour for the quarter-barrel size. Hot air used in all operations is kept from 600 to 800 deg. F. by forced blowers using a mixture of gas and air.

American brands

(Continued from page 62) industrial consultants, states that one of the important functions of advertising is "to provide information to those fighting on the home front and in the production fields.

"With the possible introduction of the Victory label for canned and packaged goods," said Golden, "the question arises, what will happen to brand names of merchandise for which producers have spent millions of dollars in advertising to make consumers 'brand conscious'?

"Manufacturers in Great Britain have met this problem in safeguarding their investment in brand names by continued advertising. Brand names can and should be kept alive in the minds of those to whom the manufacturer must look for business in the postwar period. If the salability of advertised merchandise is to be maintained, people must be told continually of the high quality of the merchandise bearing specified brand names."

Advertising, in its broad sense, applicable to all media, must always perform an important function where the public acceptance of new programs is contemplated. Dr. Kenneth Dameron, director of the Committee on Consumer Relations in Advertising, Inc., in commenting recently that price restrictions and rationing cannot succeed without the aid of advertising, urged individual advertisers to assume part of the job of overcoming consumer ignorance and unpredictable prejudices which may arise from adverse consumer mass opinion.

"Under any program of rationing during conditions of merchandise shortages," said Dr. Dameron, "consumers must be taught how to use goods in order to get the most out of them—in brief, how to conserve them. There isn't a segment of this program of educating the consumer—to function effectively under conditions of price regulation and rationing—which cannot be utilized in advertising copy. It is one thing to give information; it is quite another to make information persuasive and effective."

An analogous view in respect to another form of advertising was expressed by Roger Wolcott, Executive Secretary of the National Consumer-Retailer Council. He emphasizes that fixing of prices is only a part of the problem and that realistic



ON THE ROAD TO DESTINY

THIS is a country where boys still can go fishing. Let's keep it that way.

As our sons and daughters move along the Road to Destiny, we must win this war to fulfill our obligation to them. Today and every day Heekin's great batteries of color presses run at full speed producing millions of lithographed cans used for defense and for war. If you are packaging such a product, we can serve you quickly and efficiently. If your business is not adapted to war needs, we're glad to talk with you about the future—for there is a future for all of us. In the meantime—Look Ahead.

THE HEEKIN CAN CO., CINCINNATI, OHIO

HEEKIN

Lithographed Cans

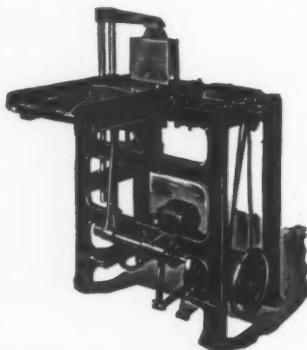
WITH HARMONIZED COLORS



**Care will extend
THE NORMAL LONG LIFE
of
YOUR PETERS MACHINES**

Companies who have Peters Carton Packaging Machines are fortunate in that these machines are built for many years of satisfactory performance. Of course,

these machines like all others must be cared for properly, oiled regularly and kept in first class condition.



**PETERS JUNIOR CARTON FORMING
AND LINING MACHINE**

Sets up 30-40 cartons per minute
Requires one operator
Can be made adjustable



**PETERS JUNIOR CARTON FOLDING
AND CLOSING MACHINE**

Closes 30-40 cartons per minute
Requires no operator
Can be made adjustable

If you require repair parts, do not hesitate to order them.
To obtain new machines however requires a priority of A-9 or better.

We urge you to inspect your machines regularly and keep them running at maximum efficiency.

technique is required for handling the price-quality relationship, if serious public-relations problems are to be avoided later on for both the government and business. There are only two ways to inform consumers of the price-quality relationship for a given piece of merchandise—through standards or through the use of informative labels. The label method, Mr. Wolcott said, is more flexible, can be more quickly put into use and will give consumers the essential data for judging merchandise quality at the respective prices.

In any event, whether consumer acceptance is to be attained by space advertising or label display or other media, the important part to be remembered is that the well-known indicia of quality are in danger of losing their customary significance. As an auxiliary memory factor, the trade mark and the package design perform the function of visualizing and fixing a standard of quality. Together they set a mark or inducement, perhaps even a straight-jacket, for the maintenance of that quality, without which the prospect and the hope of a carry-over from prewar value to postwar value seem definitely in peril. The fundamentals of our distributive system must survive. Business men have an interest in seeing that they shall survive.

Higgins ink

(Continued from page 92) lapping ends, color spot, color name and manufacturer's identity and quantity all on the face of the label. Labeling accomplished, the bottles travel by track conveyor to the cartoning machine. En route each bottle is laid on its side, passed into a U-shaped receptacle, carried on an endless belt past the counting device, then pushed head first into its individual carton. These cartons, of course, are fed into the cartoning machine flat, where they are opened up, top flaps glued, loaded with the bottle and finally glued on the bottom. Then the filled cartons come to a conveyor track the length of which was planned to hold the sealed ends until fully dried. End-sealed top and bottom, the cartons are proof against tampering until the package reaches the ultimate consumer. As they near the end of this long conveyor track, the cartons are turned upright in preparation for the bundling operation. They are wrapped automatically six to a package. The outer wrap is a specially patterned kraft paper, fed from a roll into the machine which cuts it to the proper size, performs the wrapping and gluing, and places end labels on each package. These bundles of six emerge from the delivery end of the wrapping machine to the shipping table whence they go to perform their infinite variety of services.

Among the duties performed by drawing inks today is the important service in army and navy engineering. It has been estimated that something like 30 tons of blueprints are required to build a battleship. Every drawing used must first be executed in ink. Higgins inks are doing their bit in the war effort.

Credit: Bottles, Hazel-Atlas Glass Co. and Armstrong Cork Co. Stoppers, Compo-Site, Inc., The Siemon Co. Labels, Frank Collyer. Cartons, Robert Gair Co., Inc. Outer Wrap, Richard Bauer & Co. Filling and corking machine, Pneumatic Scale Corp. Labeling machine, Pneumatic Scale Corp., Ltd. Cartoning machine, F. B. Redington Co. Bundle wrapping machine made by Package Machinery Co.

PETERS MACHINERY COMPANY
GENERAL OFFICE AND FACTORY
4700 RAVENSWOOD AVENUE, CHICAGO, ILL.

*In These Trying Days of
"SHORTAGE of HANDS"*



The Beck Sheeter

will release hands for other work, because thru its great simplicity, it needs very little of the operators' attention, once it is set. Especially when equipped with **ELECTRIC EYE CONTROL** are you freed from human element in your sheeting work. Amazing degrees of accuracy in "spot sheeting" work, plus profitably increased outputs. The need for doing your own sheeting is probably more acute now than ever before in your business history, and this because of present conditions.

CHARLES BECK MACHINE CO.

13th & Gallowhill Streets

Philadelphia, Pa.



**UNCLE SAM
REQUESTED
...WE
RESPONDED**

The government has asked that we use the entire facilities of our plant in the production of essentials for army and navy use.

We will not be able to produce any of our paper converting equipment unless orders are accompanied by priorities which indicate they are needed for our war effort.

We will be happy to furnish you with replacements for parts in machines of our make, you are now operating, provided your orders are accompanied by needed priorities.

If we can in any way advise you on matters pertaining to better operation of your equipment do not hesitate to ask. We will respond promptly.

HUDSON-SHARP
MACHINE CO. • GREEN BAY • WIS

A STORY OF SAVINGS

IN 4 WORDS!

LUSTEROID
VIALS AND TUBES

LUSTEROID, the distinctive ultra-modern plastic container, now brings you new eye-and-buy appeal . . . plus practical advantages that spell substantial savings like these:

SAVE Weight—LUSTEROID weighs only 1/5 its equivalent in glass, yet provides the strength and rigidity you require.

SAVE Material—By conserving vital material while doing a better job, LUSTEROID serves both country and industry.

SAVE Work—No protective partitioning or packing required. No labels to affix—your design and sales messages are reproduced in color as an integral part of your LUSTEROID containers.

SAVE Money—LUSTEROID savings in weight, material, handling, labeling, packing and shipping costs all add up to substantial savings in money.

- LUSTEROID vials and tubes are tough, resilient, unbreakable—will not brittle with age. Available in all colors—either transparent or opaque—with cork, slip-on or screw-cap closures—in standard diameters from $1\frac{1}{4}$ " to $1\frac{1}{4}$ " and lengths up to 6".

Write or wire for the complete LUSTEROID story today

L U S T E R O I D
CONTAINER CO., INC.

*Formerly Lusteroid Division of
the Silcock-Miller Company*

10 Parker Avenue, West • South Orange, New Jersey

ADHESIVES FOR THE...

SET-UP BOX



FOLDING CARTON



TUBE & DRUM



LABEL



INDUSTRIES

We recommend and support the promotional campaign of the "Master Craftsmen of the Set-Up Paper Box Industry." We have always supported the set-up box as an important and useful package—and our adhesives have "supported" many millions of set-up packages.

Our facilities for making adhesives, and creating new formulas are open to all fields, however. Just as there is a need for all package types, each container requires a different adhesive. We have developed approximately 800 formulas to serve special needs of all package manufacturers. Both the creative and manufacturing phases of our business are at the service of all.



Established 1866

Union Paste Company

1605 HYDE PARK AVENUE • HYDE PARK, MASS.

Memory joggers

(Continued from page 78) board done in colors and is punched for two dozen knobs. These are held firmly in place by the nut which later attaches the knob to the kitchen utensil. Fast sellers on the remainder basis.

Carborundum Scissors Sharpeners: "Now You Can Always Have Sharp Scissors!" is the caption at the top of the panel of counter display which measures 12 by 12½ in. and holds one dozen scissors sharpeners, each in its individual packaging. Price of the item is indicated on the panel. The fetching part of the display is a 4-in. white-outlined circle containing the picture of a pair of scissors, one blade of which is being drawn through an actual carborundum sharpener. This latter is held in strategic position by die-cutting just beneath the blade. Below the circle, the customer sees: "Quick. Easy. Accurate. A Few Strokes On Each Blade And Your Scissors Cut Like New!"

Tester's Waterproof Cement: This metal rack counter display with contents goes a long way towards proving the homely adage that seeing is believing. Just beneath a dozen hook-suspended tubes of cement is a china plate, cracked and mended. This plate can be removed, handled and examined by the customer. Also attached to the top hooks are two wooden spools and two strips of leather, each cemented together, to indicate the varied uses of the product.

Edlund Can Opener: "Try It Yourself!" says Edlund's 18-in. tall can opener display for counter or table use. And... you can try it, yourself. This particular display holds an actual tin can and an actual can opener, with the above invitation spread across the bottom center of the main panel. The top portion shows a girl holding up a can in her hand and this caption to attract the store customer, "Easy To Open With Edlund Junior!" This item is a 50-cent seller. Many housewives still think in terms of a 10- or 15-cent opener, but this demonstrator builds the sale into a "fifty center" because it positively shows and proves the difference between ease and difficulty, between jagged and smooth-cut can top edges.

Hygrade Electric Lamps: Almost every modern household uses lamp bulbs, but does the housewife or householder always remember the needed replacements? Hygrade, along with other lamp manufacturers, has provided the memory-prompter in the form of a lamp bulb display, a sizable metal device shaped somewhat like a box with an inclined top, capable of holding 48 bulbs in size from 25- to 150-watt. The display is electrified so that one lighted bulb in the socket beneath the display gives the effect that all 48 are lighted.

Plastic Wood: This universally used mending product comes to the retailer in both tubes and cans (perhaps a substitute container must be found for both). The 25-cent tubes are conveniently packaged in a carton which opens into a counter display for its one-dozen tube contents. One side of the carton folds up into display panel carrying these words: "Wood In a Tube!" . . . "Plastic Wood Will Fix It!" A picture of the tube is used beneath a composite showing four different uses of the product. The display occupies only 2½ by 5-in. of the counter top and has proved very effective.

The application of counter and table displays to merchandise is practically limitless. I must frankly admit that we have been amazed at our own lack of correct judgment in gauging properly the self-merchandising ability of many of the articles which are now old-timers on our counter tops. Items which, in the light of our previous lack of experience, seemed destined to be slow sellers, have speedily come to the front

Form-Fit, HERMETIC Overseal

This new invention is a triple-function secondary closure. It locks primary closures of metal, plastic and paper to bottles, jars, jugs of pottery and glass.

Hermetically seals every part and crevice of your closure.

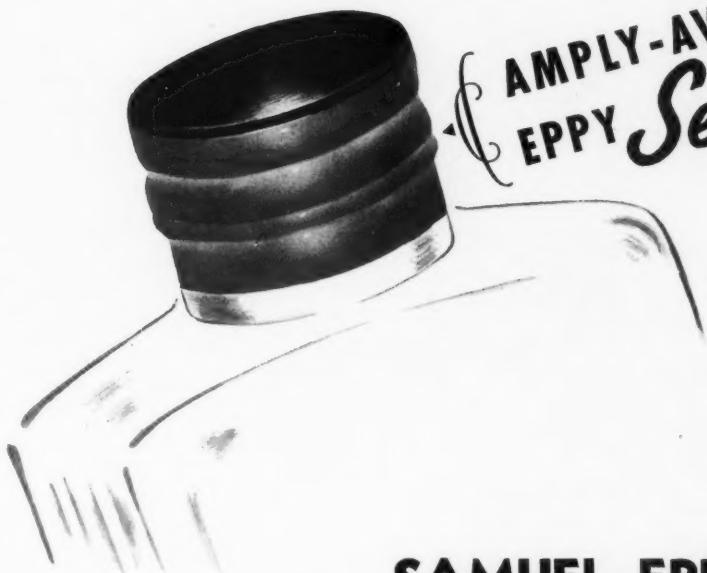
1. Moisture-proof
2. Tamper-proof
3. Label-seal for drugs, pharmaceuticals, foods, wines, liquors, beer, etc.

It is easy to apply—self-sealing.

Requires no machinery.

Immediately available to all industries.

"EPPY SEALS" will do your job.
Send for samples.



AMPLY-AVAILABLE
EPPY Seals

Comes in GOLD,
SILVER, TRANSPARENT & COLORS.

Can be imprinted with trade-mark, slogan or design.

Replaces cellulose bands; replaces foil closures.

If you have a closure problem try Eppy Seals.

SAMUEL EPPY, INC.

333 HUDSON STREET

NEW YORK CITY

HAVING LABELING TROUBLE ON SUBSTITUTE PACKAGES?

Amazing Kum-Kleen solves the problem for it sticks where others fail



This dry label adheres to varnished surfaces glass, plastic, cellophane, wood, metal

Here is an entirely different type of label for it is quickly applied without moistening, adheres permanently to any smooth non-porous surface, is easily peeled off when necessary, never pops off even under intensive heat, cold or climatic changes—and it pays for itself many times over in application savings alone!

Write today for the complete story of dry labeling, learn what it has done for others—and can do for you!

Kum-Kleen **LABELS**

AVERY ADHESIVES • 451 E. 3rd St., Dept. EN-9 Los Angeles, Calif.



GUESSING CAN BE EXPENSIVE

There is no need to guess the solution of your next color problem as our Color Research Laboratory has compiled the information you need. Send today for your copy of the booklets listed below:

COLOR ACCEPTANCE

—Its Normal Demands and Wartime Limitations

COLOR SURVEY REPORTS

Direct Mail, Products, Packaging

and Space Advertising

COLOR FACTS SERIES

Important data on the best colors

'to use and why'

INDIVIDUAL _____

COMPANY _____

ADDRESS _____

SPECIMEN BOOK

Showing 48 Colors

EAGLE BLACKS

21 blacks correlated to the most commonly used stocks

EAGLE PRINTING INK COMPANY

BIVISION GENERAL PRINTING INK CORPORATION

100 SIXTH AVENUE, NEW YORK

CHICAGO CINCINNATI PHILADELPHIA JERSEY CITY

BALTIMORE CAMBRIDGE

Quick Packaging



for Quick Frozen FOODS!

HERE'S an ideal unit for Quick Frozen Foods Packagers—the Triangle Model N3A Electric-Tri-Pak, one of a complete line of Vibratory Feed Weighers designed to handle an exceptionally broad range of products. Triangle Elec-Tri-Pak Weighers are now in daily use packaging frozen foods, such as peas, lima beans, cut string beans, etc. These units are extremely accurate, fast, flexible, handle frozen foods gently and will fit into any packaging set-up. They can be installed in multiple units with or without automatic conveyors to meet any production requirement. Write or wire today for further facts.

Send for this Booklet !



• Facts and figures is the name of this illustrated compilation of case studies of Triangle packaging from a broad cross section of users. Send for your copy today.

TRIANGLE PACKAGE MACHINERY CO.
907 NO. SPAULDING AVENUE, CHICAGO
BRANCHES IN ▼ PRINCIPAL CITIES

rank, all because of customer reaction impelled by displays.

On our counters and tables in the store today one may observe quite a wide variety of self-selling counter display. Rubber bottle stoppers, lead pencils, coil wire, rat poison, shoe strings, percolator glass tops, household solder, paring knives, can rubbers, flashlights, sun goggles, window chamois, fishing floats, razor blades, kitchen wall clocks, silver polish. If you can say with assurance just where this list of varied merchandise, to merit retailer approval, must stop, you are a wise man, indeed.

The point I wish most of all to stress is this: Merchandise thus counter-display packaged when shipped by manufacturer or jobber to retailer is already well on its way to the consumer. These are trying days for business. Every easy sale made by the retailer is a star in the crown of distribution-cooperation. Never forget the retailer's order book repeats and repeats on items of stock which make these sales.

Watertight sealing glue

(Continued from page 68) In the tests, sections of board 6 by 10 in. were used, sealed together with the sealing glue and then permitted to dry for 24 hours. The glue was applied to one side of one piece of board and the other piece was brought in contact immediately and pressure was applied for about two minutes' time. Then the glue samples were allowed to dry thoroughly. The glued pieces of fibreboard were immersed in water at a constant temperature of 70 deg. F. and then were removed at definite intervals for checking both the condition of the board plies and glued film. After immersion for 31½ hours the board plies were wet half an inch from the edge of the sheet but the glue film was still well adhered. After 54½ hours the board plies were wet ¾ in. from the edge of the sheet and the glue film was wet 1 in. from the edge of the sheet. The board fibres still tore, however, when two pieces of board were separated. The sealing glue still showed good adhesion even after almost 55 hours of soaking at 70 deg. F. and had not soaked back over 1 in. from the edge.

Credit: Sealing glue by The F. G. Findley Co.

Cartoon cartons for soap

(Continued from page 57) and there is practically no variation in price between one piece and another. By keeping the cost of the soap sculptures more or less the same, Tre-Jur retains this voluntary "ceiling price" of 59 cents.

The display cartons are made of light-weight board and there is practically no waste of material in their manufacture. The saving of weight in shipment and of material since the adoption of these display folding boxes has been considerable, the company reports. Since the boxes are shipped flat to the Tre-Jur plant, the problem of storage is reduced to a minimum. Thus sufficient supplies of them may be kept on hand at all times, as they occupy very little space and they may be used as needed. All these factors have helped the company to maintain a constant one-price level on these items. This has been done in spite of rising costs connected with the manufacture of the soap itself, the price of trimmings used and the great amount of manual work which must be done in order to decorate the figures and arrange them on the display pieces.

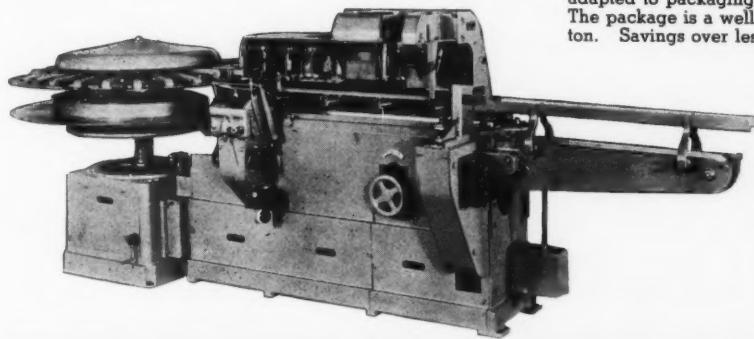
Credit: Folding display boxes by Brooks & Porter.

If You've Been Packing in Tin- Investigate SEALTITE Before Choosing an Alternative Package

If you can no longer use tin for packaging, you will probably have to choose between a paper bag and a glass jar. Because SEALTITE produces a tight, sift-proof package loaded with sales appeal with any standard intuck or gusseted paper bag, you should get the full story of this modern bag sealer before making your decision.



SEALTITE is a fully automatic bag sealer which packages any product adapted to packaging in a paper bag at speeds of 15 to 50 per minute. The package is a well settled, nicely squared bag that stacks like a carton. Savings over less efficient methods of packaging are impressive.



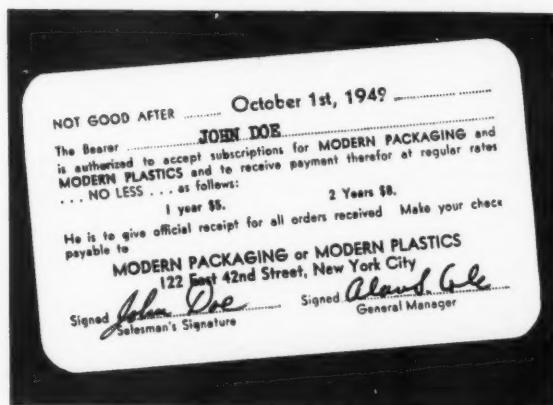
(If your product seems better adapted to packing in a glass jar, you should get complete information on Consolidated Screw Capping Equipment.)

Although much of our capacity is devoted to producing special equipment directly connected with our Armed Forces, we are endeavoring to supply the essential needs of our regular customers who can secure satisfactory preference ratings. We are maintaining service on Consolidated equipment already in operation, but urge our customers to give extra care to maintenance and servicing in order to conserve man-hours and materials for essential war work.

CONSOLIDATED PACKAGING MACHINERY CORP.
1400 WEST AVENUE BUFFALO NEW YORK

SUBSCRIPTION WARNING

Pay your subscription agent only if he has our Authorization Card dated October 1, 1942.



Make checks payable to

MODERN PACKAGING
Chanin Building, 122 E. 42nd St., New York, N.Y.

SPECIALISTS
in the manufacture of
CAN & BOTTLE
CLOSURES



LET us quote you on your requirements. Hundreds of dies and molds available for Essential Oil Cans, Sprinkler Tops, Screw Caps, Aluminum Capped Corks, Lead and Tin Coated Spouts, Metal Specialties. 80 years' experience in meeting the needs of packagers. Call upon us for aid.

CONSOLIDATED FRUIT JAR COMPANY
NEW BRUNSWICK • NEW JERSEY

INDEX TO ADVERTISEMENTS

Aluminum Co. of America.....	7
Aluminum Seal Co.....	13
American Can Co.....	Inside Front Cover
American Cyanamid Co., Plastics Div.....	31
Anchor Hocking Glass Corp.....	19
Armstrong Cork Co., Glass & Closure Div.....	21
Artistic Flower Co.....	115
Avery Adhesives.....	111
Beck, Charles, Machine Co.....	109
Brooks & Porter, Inc.....	70
Bulkley, Dunton & Co.....	Insert 96-97
Burt, F. N., Co., Inc.....	63
Cameo Die & Label Co.....	33
Carr-Lowrey Glass Co.....	11
Celanese Celluloid Corp.....	16-17
Chicago Printed String Co.....	15
Classified.....	115
Consolidated Fruit Jar Co.....	113
Consolidated Packaging Machinery Corp.....	113
Continental Can Co.....	27
Crown Can Co.....	77
Crown Cork & Seal Co.....	103
Dow Chemical Co., The.....	101
du Pont de Nemours, E. I. & Co., Inc., Cel-O-Seal Section.....	23
Durez Plastics & Chemicals, Inc.....	Inside Back Cover
Eagle Printing Ink Co.....	111
Eppy, Samuel, Inc.....	111
Ferguson, J. L., Co.....	95
Fitchburg Paper Co.....	26
Forsman, C. H., Co.....	Insert 18-19
Gardner-Richardson Co.....	8-9
Harris-Seybold-Potter Co.....	87
Heekin Can Co., The.....	107
Hinde & Dauch Paper Co.....	12
Holyoke Card & Paper Co.....	Insert 96-97
Hudson-Sharp Machine Co.....	109
Imperial Paper Box Corp.....	115
Keller-Dorian Corp.....	Insert 68-69
Kimble Glass Co.....	28
Lowe Paper Co.....	99
Lusteroid Container Co., Inc.....	109
Maryland Glass Corp.....	91
Master Craftsmen of the Set-Up Paper Box Industry.....	18
Monsanto Chemical Co., Plastics Div.....	116
Mundet Cork Corp.....	22
Nashua Gummmed & Coated Paper Co.....	36
National Can Corp.....	34-35
Owens-Illinois Glass Co.....	24-25
Package Machinery Co.....	80
Peters Machinery Co.....	108
Phoenix Metal Cap Co.....	3
Pilliad Cabinet Co.....	79
Pneumatic Scale Corp., Ltd.....	93
Redington, F. B., Co.....	5
Rhinelander Paper Co.....	105
Riegel Paper Corp.....	29
Ritchie, W. C. & Co.....	10
Shellmar Products Co.....	Back Cover
Stecher-Traung Lithograph Corp.....	6
Stokes & Smith Co.....	89
Sylvania Industrial Corp.....	30
Triangle Package Machinery Co.....	112
Union Paste Co.....	110
Warner Bros. Co.....	20

MODERN PACKAGING
BRESKIN PUBLISHING CORPORATION
122 East 42nd St. New York City

NOW!

YOU CAN AFFORD TO REPLACE YOUR PACKAGE WITH A SET-UP BOX

You can get set-up boxes in the quantities you need at the price you can afford.

You can get them manufactured at high speed, automatically, of all the new protective coated and laminated boards: moistureproof, greaseproof, oilproof, etc. You can take full advantage of the strength of the set-up box. We make all types of automatic strip and blanket top boxes from the smallest size which can be adapted to replacement purposes. We'll be glad to show you how.



IMPERIAL

PAPER BOX CORP.

252 NEWPORT ST. BROOKLYN, NY.

CLASSIFIED

WANTED

Experienced man to handle the estimating, cost control, machine lay out and production efficiency of box and crating plant operating on war contracts. To such a man one of the largest lumber and millwork concerns in Michigan offers unusual opportunity as department head. State experience, qualifications, general background, and salary expected. Reply Box 160, Modern Packaging.



Pre-tied Bows for PACKAGE DECORATION

Attract buying power YOUR way with bright ribbon bows and colorful ribbon novelties.

These bows and novelties are made up to meet the specifications of your package. Bows can be had in a wide range of colors, styles and sizes.

They're inexpensive, easy to apply. Write for prices, information, samples.

ARTISTIC FLOWER CO.
PRE-TIED BOWS—RIBBON NOVELTIES—RIBBON
24 East 21 Street • New York City

This Space Will Henceforth Be Devoted to Classified Advertisements.

Classified advertisements may be inserted at the nominal rate. \$5.00 per inch. Minimum space—1 inch.

ADVERTISEMENTS Will Be Restricted to Those of a Helpful Nature.

Positions Wanted, Help Wanted, Lines Wanted are typical categories.

Address: Classified Advertisements

MODERN PACKAGING MAGAZINE
122 East 42nd Street • New York City



How a PEACETIME packaging star NOW SPEEDS WARTIME CONSTRUCTION

In its short but eventful career in the packaging world Vuepak has helped win many a peacetime packaging award—and many an extra sale for products displayed through its clear, rigid transparency.

Now Vuepak's first job is helping win the war.

One way the talents which made Vuepak a peacetime packaging star are helping speed the war effort is in this all-plastic window for temporary, pre-fabricated Army barracks. Quick and easy to install, easy and inexpensive to replace, these window panes are still tough and sturdy enough to stand up well under rough service and changing weather. Concussion from shells or bombs will not shatter them into dangerous, sharp-edged fragments, yet, clear and transparent, they admit plenty of light.

Frames, too, are a Monsanto plastic well known to the packaging world—Lustron, Mon-

santo's polystyrene, lightest of all the commercial plastics.

In war service the rainbow-wide color range and sparkling lustre which made Lustron a favorite for injection-molded containers for a variety of peacetime products is not of prime importance. But its light weight, unusual resistance to acids and alkalis, its high dimensional stability and the speed and economy with which it can be injection molded—all those are virtues which are being used to good advantage in jobs like this.

Now and for the duration such applications as these barracks windows mean less and less plastics for packaging—but here's an important fact to remember in planning your post-war sales strategy. As Monsanto research chemists and plastics technicians strive to fill new and exacting war jobs with stronger and better plastics, they are automatically producing stronger and better plastics for post-war packaging! MONSANTO CHEMICAL COMPANY, Plastics Division, Springfield, Massachusetts.





HOW "NO SOAP!" BECAME THE START OF A SUCCESS STORY!

Molded of Durez 75 by Seder & Sons Molded Products Co. for John F. Schoof.

WHEN THE METAL SHORTAGE became acute...it looked like a case of "No Soap!" for the manufacturers of shaving creams and other toilet goods.

The problem was to develop a package that would release the metal so vitally needed for war production. Naturally, plastics were given immediate consideration.

But *what* plastics should get the call?

After exhaustive tests...the answer boiled down to *Durez 75*. And we mean exhaustive! Sample containers, molded of *Durez 75*, were boiled in water to determine whether the units would expand or con-

tract to cause binding.

Yet like all *Durez* plastics that are designed to "fit the job"...75 proved it could stand up to the most rigorous specifications. For *Durez 75* is also unaffected by mild acids and alkalis. Furthermore, it is ideal for the packaging of creams, lotions and other cosmetics since it will impart no taste or odor to the product.

So if your packaging problem looks like a case of "No Soap"...put *Durez* to work. *If you rate the priority*...*Durez* engineers and chemists will be glad to recommend the phenolic molding compound to fit your job!

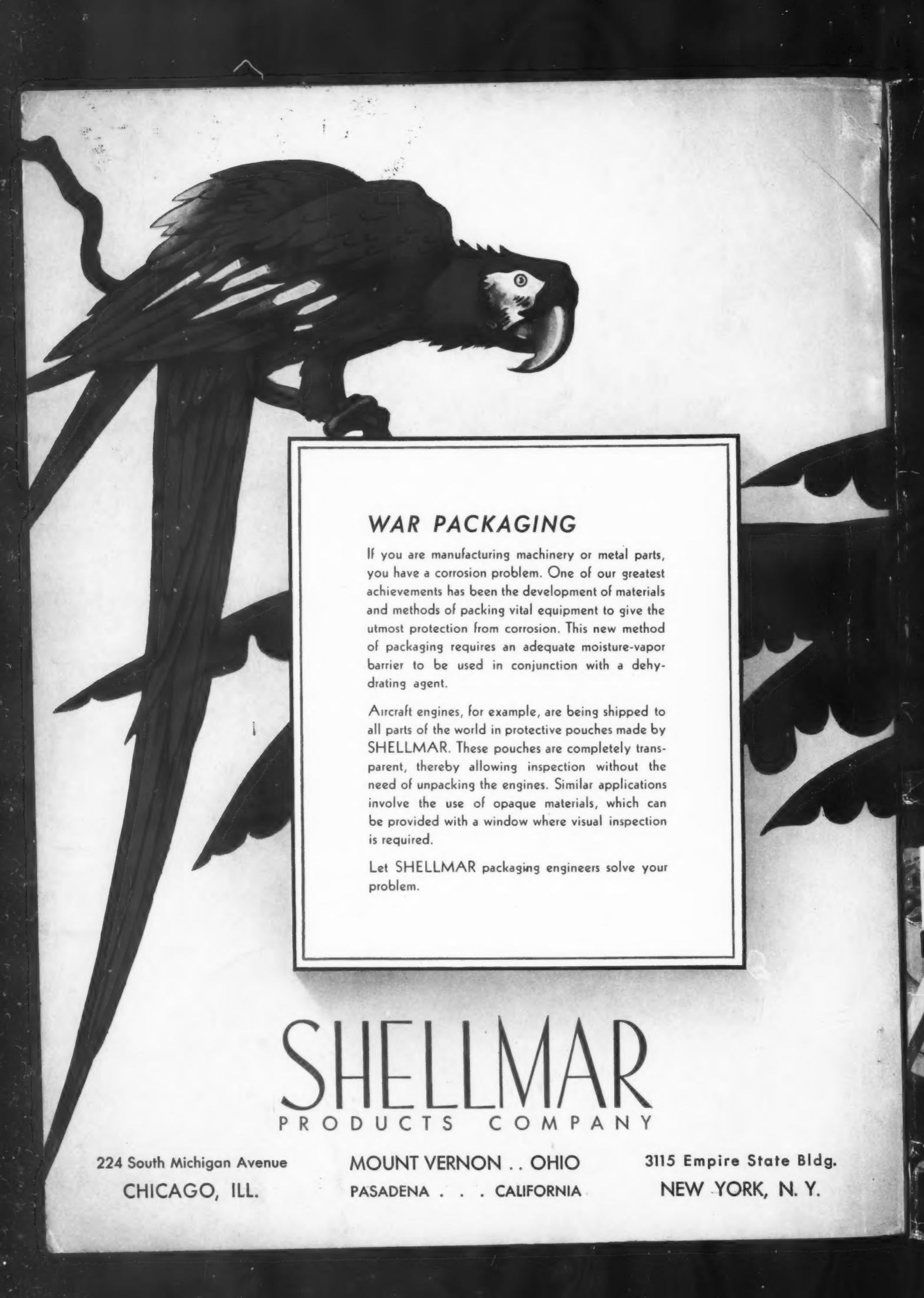
DUREZ PLASTICS & CHEMICALS, INC.



1209 WALCK ROAD, N. TONAWANDA, N. Y.

DUREZ PLASTICS & CHEMICALS, INC.

PLASTICS THAT FIT THE JOB



WAR PACKAGING

If you are manufacturing machinery or metal parts, you have a corrosion problem. One of our greatest achievements has been the development of materials and methods of packing vital equipment to give the utmost protection from corrosion. This new method of packaging requires an adequate moisture-vapor barrier to be used in conjunction with a dehydrating agent.

Aircraft engines, for example, are being shipped to all parts of the world in protective pouches made by SHELLMAR. These pouches are completely transparent, thereby allowing inspection without the need of unpacking the engines. Similar applications involve the use of opaque materials, which can be provided with a window where visual inspection is required.

Let SHELLMAR packaging engineers solve your problem.

SHELLMAR

PRODUCTS COMPANY

224 South Michigan Avenue
CHICAGO, ILL.

MOUNT VERNON .. OHIO
PASADENA . . . CALIFORNIA

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NEW YORK, N. Y.